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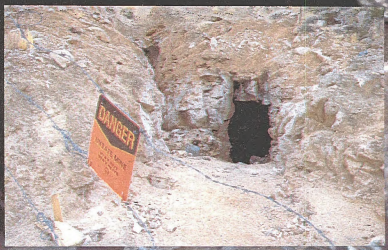
Remediation of Abandoned Mine Safety Hazards

Final Programmatic Environmental Assessment

December 2000



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Purpose of and Need for Action:

Introduction:

This Environmental Assessment analyzes the impacts of approving "typical remediations" of physical human safety hazards associated with Abandoned Mined Lands (AMLs) on public lands in Nevada. The proposed action provides a framework that allows most proposals that involve remediation of hazardous AMLs on Bureau of Land Management (BLM) lands in Nevada to be analyzed in one programmatic Environmental Assessment (EA). If a proposal to remediate or secure an AML conforms to the subject regulations and to the framework of this document, then BLM may allow the proposal without further detailed analysis. This EA is part of the BLM's decision making process in accordance with the National Environmental Policy Act (NEPA), the Federal Land Policy and Management Act of 1976 (FLPMA).

The Nevada Bureau of Land Management (BLM) entered into a Cooperative Agreement with the Nevada Division of Minerals (NDOM) in 1994 to establish and maintain coordination and responsibilities pertaining to the securing of mine safety hazards on BLM-managed lands in Nevada. The agreement, pursuant to Section 307 of FLPMA, authorizes NDOM to secure AML safety hazards on BLM lands in Nevada.

Twelve human fatalities and many injuries have resulted from incidents involving AML sites in Nevada since 1971. The spread of urban populations into areas where such sites are common and expanding recreational use of public lands makes such incidents increasingly likely. Of the estimated 155,000 AML sites in Nevada, about 50,000 may pose serious risks to human safety. Only about 5,500 of these have been secured by fencing or backfilling to date. While public information campaigns describing the hazards of AML sites have been conducted, the need to secure other high risk sites is immediate. The purpose of this EA is to expedite the securing of hazardous sites which do not require more specific NEPA analysis.

Applications of this document:

Categorical Exclusions:

Certain actions may fall under categorical exclusions and thus not require analysis under this EA. When no exceptions as described in Departmental Manual [516 DM 2.3A(3) & Appendix 2] apply, Installation of minor devices to protect human life,(e.g. grates across mines) do not require an EA or EIS. (Federal Register/Vol. 57 No 62/ Tuesday, March 31, 1992) FR Doc 92-6700.

DNA:

If the criteria and assumptions of this programmatic EA are met, a Demonstration of NEPA Adequacy (DNA) may be completed and a notification to proceed may be issued pursuant to this EA and the CA with NDOM.

Supplemental EAs:

If the proposed action is beyond the scope of this EA, another EA may be tiered upon this one to analyze the proposed action.

Relationship to Statutes, Regulations, or other Plans:

The proposed action is in accordance with applicable federal statutes and regulations , including the Taylor Grazing Act, the FLPMA, the Wild, Free-Roaming Horse and Burro Act, the National Historic Preservation Act, the Clean Water Act, the Wilderness Act, Congressional mandates, and Executive Orders.

Nevada Administrative Code Chapter 513 provides definitions of AML hazards and details the responsibilities of the state in inventorying, ranking, and remediating hazards.

Nevada Revised Statute NRS 41.0331 provides protection for remediators from civil liability.

Nevada BLM Manual H-8550-1 Interim Management Policy and Guidelines for Lands Under Wilderness Review stipulates requirements for public notice of actions in Wilderness Study Areas and provides policy for acceptable activities in such areas.

The Endangered Species Act describes the responsibilities of the Federal Government to listed species which may be impacted by the proposed action.

BLM Manual 3160 and the accompanying handbook H-8160-1 describe Native American consultation and coordination.

Critical Elements of the Human Environment:

The following critical elements of the human environment were considered in this EA as required by statutes, regulations, or Executive orders: (Handbook H-1790-1).

1. Air Quality
2. Areas of Critical Environmental Concern
3. Cultural Resources
4. Environmental justice
5. Native American Concerns
6. Noxious Weeds

7. Threatened and Endangered Species
8. Wilderness

The following critical elements are not relevant to the scope of this EA and are designated Negative Declarations:

9. Farm Lands (prime or Unique) - no such areas are included in the proposed action.
10. Flood plains - no Flood plains are expected to be impacted by the proposed action.
11. Wastes, Hazardous or Solid - Any sites which are determined to contain hazardous or solid wastes will be excluded from the scope of this EA.
12. Water Quality, Drinking/Ground - Sites where surface or ground water impacts are present are specifically excluded from the scope of this EA.
13. Wetlands/Riparian Zones - Sites with surface water or watershed impacts are specifically excluded from the scope of this EA.
14. Wild and Scenic Rivers- No designated Wild and Scenic Rivers occur within the area covered by this EA.

Requirements for Further Environmental Analysis:

This is a programmatic document for managing the remediation of safety hazards associated with Abandoned Mined Lands on public lands in Nevada. BLM field offices will perform the suitable level of site-specific NEPA analysis and documentation (including applying categorical exclusions) for all proposed remediations under the subject regulations.

If analysis finds that the remediation would significantly differ from the proposed remediations listed in the proposed action or that the proposed remediation might result in impacts not previously addressed, a site-specific EA-level analysis or environmental impact statement-level analysis may be required. This document is not intended to address remediations other than for immediate physical safety, such as those related to CERCLA/Clean Water Act or toxic release issues.

Interrelationships:

The nature of today's mining industry makes it essential for BLM to coordinate its surface management with other government agencies responsible for permitting portions of these operations. This section describes major interrelationships in the remediation of safety hazards associated with Abandoned Mined Lands on public lands.

Federal Government:

The Army Corps of Engineers (Corps) evaluates potential effects of materials placed into or removed from jurisdictional wetlands or waters of the United States. The Corps may conduct a jurisdictional delineation to decide if the proposed remediation is affected by guidelines to determine compliance with Section 404 of the Clean Water Act. Activities under the subject regulations must comply with the Clean Water Act. For information on Section 404 permits contact:

U.S. Army Corps of Engineers
Regulatory Section
300 Booth
Reno, NV 89502
ph (775) 784-5304

The U.S. Fish and Wildlife Service (USFWS) administers the Endangered Species Act. If threatened or endangered species, proposed species, or designated or proposed critical habitat could be affected by the proposed action, BLM would prepare a biological assessment based on the information from the wildlife analysis, and enter into Section 7 consultation with USFWS. After the biological assessment is submitted, USFWS would prepare a biological opinion addressing project impacts and any cumulative impacts from other activities in the same area. BLM will incorporate the findings of the biological opinion in determining how the proposed remediation may occur. The proposed action could not proceed if the proposal as mitigated would jeopardize the continued existence of a listed species or result in destruction or adverse modification of critical habitat.

State Governments:

Nevada has a formal mine permitting process that includes analysis of proposed reclamation. The state regulatory agencies responsible for mining-related permits or approvals are the Nevada Division of Environmental Protection (NDEP), Nevada Division of Water Resources (NDWR), Nevada Division of Minerals (NDOM), and the State Inspector of Mines (SIM). The Nevada Division of Minerals is also responsible for the identification and securing of hazardous AML sites on public lands within the state. The Nevada Division of Wildlife is responsible for issues involving animal life within the state, while the Nevada Division of Forestry regulates plant issues.

Local Governments:

County governments have review and approval authority over some aspects of remediation. This authority may include flood control and air quality. Tribal governments have review and approval authority for flood control and air quality for any sites within reservation boundaries.

According to Executive Order 11-988, all federally funded projects or private projects on federal lands must use proper flood plain management techniques. The authority to ensure that suitable techniques are employed has been delegated to county flood control districts. Remediation activities proposed for flood plains must be reviewed by the flood district. Operations allowed will be notified in writing that the mode of operation proposed is not detrimental or incompatible with local flood control regulations.

Public Involvement:

A notice of the proposed EA scoping process and public meetings was published in the Federal Register on July 12, 2000 (FR Vol 65. Doc. 00-17574). During the initial thirty-day public comment period, which closed August 11, two written and two verbal (telephone) comments were received. Two public meetings were held, on July 27, 2000 in Las Vegas, and for August 1, 2000 in Reno. These meetings were publicized in local media (newspapers and radio stations) and on the public web site of the Nevada Division of Minerals. A letter describing the proposed EA and the scoping meetings, and requesting comments from interested parties was sent on July 5, 2000 to 255 state, federal, local, tribal, industry, and environmental organizations, corporations, and individuals. The Las Vegas meeting was attended by a representative of the Nevada Mining Association, a member of the Sierra Club, an Environmental Manager of a large Nevada mine, and state and federal agency representatives.

Issues raised included:

The need for rapid coordination with the state on identification and documentation of historical inventories so that the process of closure was not delayed.

The need to consider Visual Resource Management (VRM) criteria in remediation work.

The need to coordinate with local governmental entities where appropriate, especially for actions that may impact air quality.

The Reno meeting was attended by state and field office BLM employees, the Nevada Division of Minerals, industry and Nevada Mining Association representatives, representatives of the Pyramid Lake and Lovelock Paiute Tribes, the Nevada Wildlife Federation, Great Basin Mine Watch, and unaffiliated members of the public including a local photographer and a recreationist.
Among the issues raised were:

The standards that will be imposed for site reclamation/revegetation after remediation.

The possibility of problems with groundwater in vertical shafts or with perched water tables.

The need to coordinate carefully with wilderness staff at state and field office levels to ensure that sites in wilderness or wilderness study areas are properly identified and appropriately remediated.

Whether or not tribal lands are or could be included in remediation efforts.

Whether there is or will be "Good Samaritan" language to protect volunteers from subsequent liability associated with their remediation work.

Whether there would be a provision for overriding the requirements for biological and cultural surveys for sites which present an imminent danger to the public.

Whether there will be a "time clock" after a site is identified to ensure that remediation occurs quickly.

A written comment stressed the need for multi-season bat inventories.

Written comments from the Nevada Division of Minerals are reproduced in Appendix 8 and summarized here:

The EA should focus on reducing paperwork and accelerating the "approval to secure" process while not attempting to secure all sites to the point that they are completely hazard-free. High-hazard sites should be quickly approved. The relative merits of methods of securing AMLs should be discussed. The Division of Minerals preferred alternative is immediate fencing followed by backfilling on a case by case basis. Only orphaned sites should be considered.

Two verbal (phone comments) were concerned with potential negative impact to mining and cost to industry, and the restriction of access to potential evidence of mineralization.

Issues Identified and Selected for Analysis:

After public and internal scoping, the following issues were identified and selected for detailed analysis.

Biological Issues:

Wildlife. Sites which are to be backfilled may contain wildlife other than listed species and bats. These should be inventoried and the data obtained made available to state agencies.

Threatened and Endangered Species Protection and Recovery. Continued protection is needed for Desert Tortoises and other threatened and endangered species or BLM listed sensitive species that could be impacted by the securing of hazardous AML sites.

Bats and Other Species of Concern. Neither Nevada or California has any bats on the Federal list of threatened and endangered species. However, bats are known to use suitable abandoned mine lands for a variety of habitat purposes. One bat species is protected by the state of Nevada, and 12 species occur on the BLM Nevada Sensitive Species List. BLM policy is to provide these species with the same level of protection as is provided for candidate species in BLM Manual 6840.06 C. (See Appendix 1).

Reclamation and Revegetation. Standards or guidelines for post-remediation reclamation must simultaneously result in a productive post-remediation land use while not discouraging volunteers from performing because of cost, difficulty, or liability of reclamation.

Administrative Issues:

The BLM is cooperating with the State of Nevada Division of Minerals in identifying, prioritizing, and securing hazardous AMLs. Other administrative issues include ensuring that the process of surveying and securing AMLs is done in accordance with Federal and State safety regulations.

There is a need to expedite the process of performing need surveys and inventories and obtaining permission to remediate.

The possibility and desirability of including provisions for administrative exceptions to the need for cultural, historic and biological surveys and inventories should be considered for sites which pose an imminent threat to public safety.

Native American Issues:

It is desirable to offer tribal entities the opportunity to participate in the process of identifying and remediating hazards on tribal lands as well as lands managed by the BLM.

It is essential to ensure that disturbances associated with remediation to not impact areas of cultural or religious importance to Native American groups.

Cultural Issues:

There may be concerns about negative impacts to cultural and historic features both within mines that are secured (especially those that are backfilled), and features which may be adjacent to AML sites that could be impacted by either fencing or the removal of material for backfilling. Visual integrity of historic and/or scenic values should not be compromised by remediation.

Social and Economic Issues:

Liability: There is a need to protect volunteers from liability associated with actions taken in good faith during the course of remediation.

Recreation: Abandoned mines are sometimes used by recreational explorers. Access routes such as trails or roads may be altered by remediation efforts. Special Management Recreation areas may have separate planning efforts which would require that remediation may need to be incorporated in that plan.

Wilderness and Wilderness Study Areas: There are issues related to the special requirements for work methods, visual resource management, and post-remediation reclamation/revegetation in wilderness areas.

Mineral Resources: The securing of AML sites, especially by backfilling, may prevent access to mineral and other geologic information useful for the exploration of potential mineral resources.

Air quality: Activities beyond simple fence construction may impact air quality resources.

Issues not Selected for Detailed Analysis:

Several issues identified during the scoping process which were not selected for detailed analysis either because we expect there to be no significant impacts as a result of this proposed action, or because the issues were unrelated to the proposed action.

Issues Unrelated to the Proposed Action:

Water Issues: This EA is not intended to address any sites which may have potential impact on surface or ground water. This will include sites which are identified as having intersected ground water or perched water tables.

Hazardous Material (HAZMAT) Issues: This EA will not address any sites which have the potential to involve hazardous materials issues.

Issues Not Expected to be Impacted by the Proposed Action:

Economic Impacts to the Mining Industry: Because the remediation work addresses only abandoned sites and is either done on a voluntary basis or through funds already established by state

and federal agencies, it is unlikely that it will impose any direct additional financial burden upon the mining industry.

Wildlife: No actions taken will jeopardize the continued existence of wildlife.

Related Actions and Activities:

Interagency Abandoned Mine Land Environmental Task Force: In March of 1999 the Bureau of Land Management - Nevada State Office (BLM) initiated the formation of an Interagency Abandoned Mine Land Environmental Task Force (IAMLET) to begin remediation of abandoned mine land (AML) environmental problems associated with watersheds in Nevada. The task force is comprised of federal and state agencies with a role in abandoned mine lands in the state. Initial funding for the program is from the BLM through the Soil, Water, and Air Management Budget, in accordance with the Clean Water Action Plan. Technical expertise and project management assistance will be provided by the cooperating agencies.

The task force has recommended 33 sites for budget consideration in the near future. The task force intends to seek additional nominations from other stakeholders and solicit additional funding from other sources.

Inventories of Abandoned Mined Lands on Tribal lands: In 1995, the BLM, in cooperation with the Nevada Bureau of Mines and Geology, compiled an inventory of Abandoned Mined Land sites on the Pyramid Lake Paiute Reservation. This service is now being offered to the Walker Lake Reservation and other tribal entities as time and finances permit.

Alternative One: The Proposed Action (PA):

The proposed action is approving AML remediation proposals that meet either of the two "typical remediations". The framework of this document consists of the proposed actions and associated performance measures that remediators can use for their specific proposals. These performance measures have been developed to lessen or prevent (mitigate) environmental impacts caused by the proposed remediations. The following two proposed remediations would be used to evaluate the securing or closing of hazardous AML sites as prescribed in NAC 513.

1. Placing on public lands fences, gates, or signs designed to limit public access.

2. Backfilling of adits, shafts, or other mine-related excavations to eliminate potential hazards and limit public access.

The following are common elements of the two proposed remediation methods:

- AMLs are determined to be inactive, unclaimed, and to have no associated potentially responsible party (PRP).
- Remediations operations are conducted on lands within Nevada where BLM administers both the surface and mineral estates.
- Operations are conducted in accordance with BLM Nevada's approved land use plans.

Excluded from the Proposed Remediations:

Sites which are determined to be actively claimed or for which potentially responsible parties exist and can be located.

Sites which have the potential to impact surface or groundwater.

Sites which include toxic or hazardous material issues, except those which contain explosives with which NDOM is authorized to deal with under their Cooperative Agreement with the BLM (Appendix 7).

Alternative Two: No Remediation:

The No Action Alternative assumes an undisturbed environment where proposed remediation of Abandoned Mined Lands would continue to occur on public lands administered by the BLM at the present rate and under the current approval process. The No Action Alternative conflicts with the Federal Land Policy and Management Act (FLPMA) of 1976 and Nevada Administrative Code 513.

Information and Processing Procedures Under the Proposed Action:

This and the following section present the information and procedures that BLM would use to process requests for permission to remediate abandoned mined lands proposed action in cooperation with State of Nevada agencies. BLM will follow the same procedures under BLM guidelines if actions are taken solely by the BLM. BLM would use the following information and procedures to determine if the proposed remediation can be authorized under the subject regulations and, if the proposed remediation is authorized, what performance measures must be applied to prevent unnecessary or undue degradation.

Site Ranking:

The Nevada Division of Minerals conducts a ranking of the potential safety hazards associated with reported sites as required by NAC 513.

Determination of Site Ownership and Responsibility:

Under Cooperative Agreement No. 1422F950A50010, (Appendix 7) the Nevada Division of Minerals agrees to conduct claim research on abandoned mine sites. If a landowner or mining claimant is identified, the Division notifies them of their responsibility to secure the hazard and simultaneously notifies the county. If securing is not accomplished within the time frame established by regulation, the Division notifies the county that enforcement action is necessary. If no landowner or claimant exists, the site is declared an "orphan" and the Division secures the site or arranges for the work to be done. BLM activities will be limited to sites which are on or directly impact BLM - managed public lands.

Archeological Surveys for Temporary Closures by Fencing:

When temporary fences are installed to limit public access to hazardous sites, the fence location will be inspected by BLM cultural resources staff or Designated Archeological Technicians (DAT), and the fence moved, if necessary, to avoid effects on cultural resources.

The State Historic Preservation Officer (SHPO) will be informed of all such closures. Notification will include a description of the hazard, a map showing the location of the fence in relation to cultural resources, and a brief description of the cultural resources involved.

Archeological Surveys, Including Aeas From Which Fill Will be Taken or Which Will be Disturbed by Backfilling, or Gating:

Permanent closure of abandoned mines over 50 years old, identified on a BLM list of proposed closures for a given fiscal year, can be done without prior BLM/SHPO consultation if:

a. A professional historical archaeologist prepares a resource assessment of (1) the individual mine site(s) targeted for permanent closure; or (2) of the mining district (if the sites are located in a historical mining district). The assessment must record the shafts/adits to be closed and define the historical attributes of these shafts/adits. If the sites are determined to be historically significant, items b. through f. must be done.
b. The historical archaeologist photographs the shafts/adits before and after closure. The pictures must sufficiently illustrate the construction/engineering features of each shaft/adit, artifact concentrations, as well as an overview depicting its setting within the landscape, in a 5 X 7 inch black and white print.
c. The historical archaeologist surface maps each shaft/adit on a 7.5' USGS topographic map, as well as all areas from which fill has been gathered. An archival copy of the resource assessment, photographs, and maps must be provided to the appropriate BLM Field Office within 60 days of finishing the project. The BLM will provide the report to

the Nevada SHPO on an annual basis.

d. A professional historical archaeologist monitors placement of fill into each shaft/adit to ensure that significant historical archaeological features are not damaged by the activities. The archaeologist will file a final monitoring report with the BLM and SHPO that outlines field procedures employed to ensure compliance with this item.

e. A professional historical archaeologist ensures that fill, if taken from off site, is not part of another archaeological/historic site. The archaeologist will file a final monitoring report with BLM and SHPO that outlines field procedures employed to ensure compliance with this item.

f. The landscape is restored to BLM Visual Resource Management Class II standards (i.e. substantially unnoticeable within the historic landscape).

Wildlife Surveys, Including Bats and Desert Tortoise:

BLM Nevada Instruction Memorandum No. NV-98-013 requires that Nevada Special Status Species, including sensitive species designated by the BLM State Director, in cooperation with the State of Nevada and Nevada State Protected Species be accorded the same level of protection and consideration as is provided for Federal candidate species. This consideration is to "ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened and endangered." That policy applies to all species contained in the Sensitive Species List (Appendix 1). This list includes a number of bats known to use abandoned mine habitat as well as the desert tortoise (*Gopherus agassizii*). BLM Instruction Memorandum 93-304 requires that ". . . all abandoned mines on the BLM administered lands, prior to their closure, will be evaluated/investigated to determine if they are of value to sensitive wildlife, especially bats. BLM has also entered into a Memorandum of Understanding with Bat Conservation International Inc. to survey abandoned mines for bats prior to closure (Appendix 2). Sites for which closure activities, other than simple fencing, are proposed must be surveyed by qualified professionals for the presence of these species before closure. This will typically involve detailed surveys made at appropriate times of year, ideally during all four seasons. All surveys will be conducted in accordance with BLM policy which permits only appropriately trained and equipped personnel to conduct underground activities. In general, surveys will be conducted externally and no underground surveys will be done except in sites with a high probability of having significant use by hibernating bats. Wildlife other than bats which is documented will be recorded and the information made available to interested agencies upon request. Where bat use is identified, closure more restrictive than fencing will be designed and built in such ways to exclude people while allowing free passage of bats. Several such designs are included in appendix 3.

Wilderness/WSA Status Areas:

The BLM's Interim Management Policy For Lands Under Wilderness Review (H-8550-1) states in Chapter I, B.2.b.(4) that the wilderness non-impairment criteria will not apply with regard to "Uses and facilities that clearly protect or enhance the land's wilderness values or that are the minimum necessary for public health and safety in the use and enjoyment of the wilderness values." Protection of visitors to such areas from the dangers of hazardous AML sites is an action which is in the interest of public health and safety.

Due to the level of interest in the management of lands under wilderness review, the Secretary is committed to ensuring that all affected and interested publics are fully informed of any proposed actions and unauthorized activities occurring on BLM public lands. The Interim Management Policy (IMP) states, "All offices **must** notify interested parties of proposed actions on land within their jurisdiction that are managed under the IMP **before** such actions can be approved (emphasis added)." Procedures for doing so are identified in the Nevada BLM's Instruction Memorandum No. NV-98-010, dated January 16, 1998.

VRM Rating of Area:

The BLM field offices shall confirm the Visual Resource Management designation of the areas proposed for remediation and such activities will be conducted in a way that does not degrade the VRM designation. This may involve earthwork and revegetation.

Vegetation Survey of the Area to Develop an Appropriate Seed Mix for Revegetation of Surface Disturbance Associated with Remediation:

Sites where securing will involve disturbance beyond simple fencing will be surveyed for vegetation types before work ensues in order to develop an appropriate post-disturbance revegetation plan and species mix. Where cactus or yucca species occur, they shall be removed prior to disturbance and, if possible, replaced after remediation.

Development of Performance Measures:

All performance measures are developed to eliminate unnecessary or undue impacts to the resource base. These standards were developed from the following management principles:

BLM will strive wherever possible to minimize the area and extent of surface disturbance.

Fencing will be constructed and warning signs posted in accordance with BLM and State of Nevada guidelines (Appendix 6) and applicable wilderness/wilderness study area stipulations.

Sites of construction and sources of fill material will be located, where possible, in areas which are determined to be free of significant archeological, cultural, and biological resources.

If Native American cultural properties or human remains are uncovered during ground disturbance associated with remediation, work will be suspended and the appropriate tribe(s) will be consulted regarding treatment of those objects.

All remediations will be free of debris after construction and must provide a safe environment for employees and other public land users. All operations must strictly adhere to all applicable Occupational Safety and Health Administration (OSHA), Mine Safety and Health Administration (MSHA) regulations, and the Nevada Mining Code administered by the State Inspector of Mines (SIM).

In general, entry into abandoned underground mine workings by BLM employees is prohibited. Entry may be allowed in certain specific cases to implement the procedures of this document but only with adherence to strict safety procedures and approval by the BLM Field Manager. BLM is developing national AML underground safety requirements which will be incorporated into this process.

BLM would try to keep the public lands open to public entry but may restrict or close access to mines to ensure public safety and site security.

All significant disturbances will be reclaimed according to the BLM Solid Mineral Reclamation Handbook (H-3042-1), including revegetation according to the Nevada Guidelines for successful revegetation.

Sites which are candidates for backfilling or other secure closure will be surveyed for the presence of bats and other wildlife, and if such are found, will be secured with appropriate gating (Appendix 3) to allow continued use of the habitat, rather than by complete closure or filling. In certain cases it may be desirable to take additional measures to exclude non-aerial wildlife species as well.

Activities will be conducted in such a way that air quality is not adversely impacted.

Where public health and safety are a primary concern or access must be limited to protect valuable resources, BLM will authorize the placing of fences, gates, and signs on public lands to limit public access. BLM may also close the lands to public entry using the procedures specified by 43 CFR 8364.

In Wilderness and Wilderness Study areas, visual impacts of fencing shall be reduced by the use of solid color steel "T" fence posts, preferably gray.

All fences and gates would be built to protect livestock and wildlife. Specifications for fences and gates will be developed on a site-specific basis with information from BLM's site-specific biological investigation. Minimum requirements for fences are in BLM Manual Handbook H-1741-1, Fencing.

BLM will require the remediator to post public directions on fences or gates showing routes to public lands around or behind the enclosed area. The Field Manager will decide the nature of the posting on a case-by-case basis. Whenever locked gates are used, BLM must be given a key or a system of double locks used.

Reclamation of remediation sites will include removing all structures; regrading; replacing topsoil or growth medium; and establishing a diverse, effective, and permanent vegetation cover to reflect the post-mining land use.

NRS 555.010 lists designated noxious weeds in Nevada. Where these become established on disturbances resulting from remediation activities, they will be controlled. Appendix 4 lists these species.

Except as provided above, BLM must consult with the Nevada Historic Preservation Officer (NHPO) when potentially significant historical, archeological, or other cultural resources could be affected by proposed development. Under Section 106 of the National Historic Preservation Act, potential impacts to cultural resources within the area of potential effect must be evaluated for all proposed uses and occupancies. BLM would consult with the NHPO to develop protection or data recovery plans for cultural properties listed on or determined eligible for nomination to the National Register of Historic Places.

The Nevada Division of Wildlife (NDOW) has management authority and responsibility for all resident fish and wildlife on BLM lands in Nevada. NDOW has co-management responsibility with the United States Fish and Wildlife Service for migratory birds and species listed as threatened and endangered under the Endangered Species Act. BLM will request information from the Nevada Natural Heritage Program to determine whether any special status species are known to occur in the area. The Department is recognized as an important source of information in the development of mitigation plans designed to minimize impacts to wildlife resources.

Description of the Affected Environment:

This section provides a basis for assessing the impacts of the alternatives. Information is presented commensurate with the importance of impacts. Less important material is summarized or referenced. More detailed descriptions of the affected environment are presented in local land use plans, which can be inspected at BLM field offices.

Physical Setting:

The area of analysis is the State of Nevada. Nevada lies almost entirely within the Basin and Range physiographic province. The Basin and Range province is generally described as having generally north-trending mountain ranges separated by alluviated valleys. Elevations range from 490 feet along the valley of the Colorado River at the southernmost part of Nevada to a high of 13,145 foot Boundary Peak located near the California-Nevada border. The climate is semi-arid with precipitation in the mountains ranging from 20-22" to less than 10" at lower elevations. Roughly one-fourth of the precipitation falls in winter. Temperature range from over 100°F in Las Vegas during the summer to -20°F in Ely during the winter.

Geology and Mining:

BLM conducted a statewide inventory of abandoned mine land sites in Nevada based on existing studies and historical records. This information (attachment 1) has been computerized and is available on large and small scale maps. The State Division of Minerals, Minerals Commission has inventoried hazardous abandoned mine land sites. The BLM has found that when it inventories abandoned mines via on the ground surveys about two to three times as many sites are found as when estimates are derived from existing information and historical records. BLM is completing an on- the-ground survey in the Winnemucca field office and has not completed an on-the-ground survey in the rest of the state.

The current estimates of abandoned mine land sites in Nevada are:

165,000	Estimated AML sites
50,000	Estimated AML sites with major safety concerns (State agency source)

Public Safety: Cooperation and Remediation:

Under a formal MOU with the State of Nevada, Division of Minerals, Commission on Mineral Resources BLM has been cooperating with the state to inventory and remediate AML sites with public safety problems. In 1997 BLM awarded a Health Of the Land award to the State for the effort. In the last two years the following sites have been remediated on the public lands:

1998

86 hazardous mine openings were secured by NDOM 102 hazardous mine openings were secured by claim holders on public lands

1999

77 hazardous mine openings were secured by NDOM
85 hazardous mine openings were secured by NDOM
(also 117 securings on private lands)
37 hazardous sites secured with the Carson City urban interface areas

Soils:

The soils in the area range from very shallow (less than 10") to greater than 60" in depth and are derived from a variety of parent materials. The highly diverse parent materials, topography, and climates have created soils with a wide range in major soil characteristics. Soil textures vary from sand, and sandy loam in areas of granite and sandstone parent materials to clay-dominated textures in areas of volcanic parent materials. Most soils have a high erosion potential when disturbed. At higher elevations, vegetation is the main factor in controlling erosion. At lower elevations, vegetation and desert pavement are the controlling factors.

Air Quality:

Air quality varies widely by area and season across Nevada. In Clark and Washoe counties, air quality is often not in compliance with Federal and State standards, particularly with regard to PM_{10} particulate matter. Other areas of the state are unclassified for these particulates. Dust and emissions from internal combustion engines are the primary sources of air pollution which may result from the remediation of AML hazards.

Water Resources:

The EA will not address any sites which have the potential to impact either surface or groundwater quality. Therefore impacted water resources will be limited to surface runoff.

Vegetation:

The region is dominated by four vegetation communities - sagebrush, desert shrub, conifer and deciduous forests, and pinyon-juniper.

The typical sagebrush community has fairly dense to open vegetation with shrubs and an understory of perennial and annual grasses and forbs. Important shrubs in the sagebrush community include big sagebrush, black sagebrush, rabbitbrushes, Mormon tea, curly leaf mountain mahogany, bitterbrush, snowberry, and horsebrush. Grasses include Sandberg bluegrass, bluebunch wheatgrass, western wheatgrass, Idaho fescue, Great Basin wildrye, junegrass, Indian ricegrass, squirreltail, muttongrass, and needle-and-thread grass.

The desert shrub community is dominated by shrubs in open stands, with a large amount of bare soil or desert pavement. Understory vegetation is often sparse at lower elevations except when seasonal precipitation produces flushes of annuals. The Mohave, Sonoran, and blackbrush communities are dominated by creosotebush, bursage, thornbush, shadscale, spiny hopsage, and greasewood. Pickleweed, seep weed, alkali weeds, glassworts, and saltgrass occur within the saline basins.

Coniferous and deciduous forests grow in the Sierra Nevada and within the mountains of the Basin and Range Province. Species dominance varies by altitude, latitude, slope, aspect or other topographical position, soil characteristics, and climatic regime. Important forest communities associated with western rangelands in Nevada include ponderosa pine, Douglas-fir, aspen, and spruce-fir.

The pinyon-juniper vegetation type grows at mid-elevations on mountain slopes. It is a cold-adapted evergreen woodland with the unequal dominance of two conifers, juniper and pinyon pine. The trees may present a closed canopy without understory vegetation, or the community may appear as an open stand of scattered trees with a diverse and well-developed understory. The associated species include Rocky Mountain juniper, Utah juniper, one-seed juniper, and pinyon pine. The associated understory of shrubs, grasses and forbs consists of a variety of vegetation from sites near woodland communities.

Vegetation Management: The BLM currently actively manages vegetation thru riparian and upland restoration, fire rehabilitation, and noxious weed control, among other programs. Federal agencies have a duty to manage undesirable plants on lands under their control under the Carson-Foley Act of 1986, Federal Noxious Weed Act of 1974, as amended (P.L. 93-629) and other laws and regulations. As of June 2000, 44 plant species are designated noxious weeds under NRS 555.010. (Appendix 4).

Nevada has 11 plant species that are listed as threatened. (Appendix 5).

Wildlife:

Nevada supports about 400 bird species, 80 mammal species, 60 reptile species, and 40 fish species. The existence of these species is due to the habitat diversity present throughout the state. These habitats range from low rainfall Chihuahuan and Sonoran deserts to moderate rainfall areas and mountainous regions. It is difficult to predict the nature, distribution, and significance of wildlife resources at this programmatic level. These resources will be assessed in BLM's local investigations of site-specific actions. Wildlife management (hunting seasons, trapping, fishing) is the responsibility of the Nevada Division of Wildlife (NDOW). Species likely to use Abandoned Mined Lands as habitat includes various mammals, reptiles, birds, and invertebrates. Nevada has 40 animal species listed as threatened or endangered. (Appendix 5).

Wild Horses and Burros:

BLM protects wild horses and burros on public lands under the Wild Free-Roaming Horse and Burro Act of 1971 (PL 92-195). As such, BLM protects these equines from capture, branding, harassment, and death, and they are to be managed where presently found (1971) as an integral part of those public lands. They are to be managed to achieve and maintain a thriving natural ecological balance on the public lands and in a coexistent state with other public land uses. An estimated 594 wild burros and 22,291 wild horses roam free on public lands within Nevada's 97 herd management areas.

Cultural Resources:

BLM defines cultural resources to include both properties and traditional lifeway values. Properties consist of anything that shows evidence of having been made, used, or altered by humans. A traditional lifeway value is the quality of being useful in or important to the maintenance of a specified social or cultural group's traditional systems of religious belief, cultural practices, identity, or social interaction. A traditional lifeway value may be associated with a property or may be independent of a property or definable location.

Cultural resources in Nevada range from 11,000-year-old mammoth hunting camps of the earliest Americans to trails and forts of early explorers to historic mining, ranching, and transportation sites. Examples of prehistoric cultural resources are temporary hunting and gathering sites, villages, trails, rock art, geoglyphs, quarries, tool manufacturing areas, shrines, roasting pits, grinding stones, agricultural features, and surface scatters of artifacts. Historic sites include structures, trails, wagon roads, railroads, mines, sawmills, cairns, artifacts, and other materials associated with European exploration and settlement.

Prehistoric and historic cultural resources are found in all vegetation zones and at all elevations throughout the state. In general, prehistoric sites are denser near water and exploitable natural food sources such as pinion groves. The location of many historic sites is governed by the presence of natural resources, such as minerals that were extracted, and the proximity of land suitable for farming and livestock grazing.

The nature, distribution, and significance of cultural resources that might be affected by remediation activities cannot be predicted with precision at the programmatic level. These resources will be identified and assessed in BLM's local investigations of site-specific actions.

Wilderness Resource Management:

Lands managed by the BLM in Nevada include 112 Wilderness Study Areas totaling 5.1 million acres. All or portions of 52 of these, totaling 1.9 million acres, have been recommended for

wilderness designation. All remedial actions within Wilderness and Wilderness Study Areas in Nevada shall be conducted in accordance with the Interim Management Plan.

Areas of Critical Environmental Concern:

Lands managed by the BLM in Nevada include 30 Areas of Critical Environmental Concern (ACECs), totaling 1,139,267 acres. Remediation activities in these areas must conform to the management plan for the areas.

Visual Resources Management:

Visual resources consist of the land, water, vegetation, animals, and other natural or human-made features visible on the public lands. Individual areas of the public lands have a variety of visual values and consequently warrant different levels of management. BLM must therefore systematically identify and evaluate the site-specific visual values and determine suitable levels of management. These visual values are identified through the visual resource management (VRM) inventory and are considered with other resources in the resource management planning (RMP) process.

BLM establishes visual management objectives in RMPs in conformance with the land use allocations made in the plan. These area-specific objectives provide the standards for planning, designing, and evaluating future management actions.

Recreation Resource Management:

To enhance the quality of wilderness and outdoor recreational opportunities, BLM manages public land and water resources for their wildlife, scenic, archaeologic, and historic values. BLM's recreation program contributes to the tourist economy of Nevada and helps satisfy the growing public demand for outdoor recreation by providing opportunities on BLM-administered lands.

Economic Conditions:

Mineral output in Nevada in 1999 was valued at $2.7 billion (not including oil and geothermal), and 12,360 people are directly employed by the mining industry. Large gold mines employ most of these workers. But a sizeable population makes a living by small-scale mining on public lands. These mines play a large role in providing employment in many rural areas in the state. Businesses that supply goods and services to these small mines employ other people. Exploration for mining is an important element in minerals' production, and may rely on evidence at old mine sites.

Social Environment:

Nevada has large areas with sparse populations. Many individuals are engaged in rock hunting, exploring, recreation, prospecting, and small scale mining.

Environmental Consequences:

In general, under the preferred alternative, sites that receive a high hazard ranking and meet the criteria of this evaluation will be secured to reduce or eliminate hazards to human safety.

In cases where the site is secured by simple fencing, there will not be any impact to the resource base. Backfilling or gating of sites has the potential to impact some plant and animal species. In these cases, mitigation will be done to minimize this potential impact.

The environmental consequences of the proposed action and the no action alternative are analyzed in the following pages.

Impacts on Climate and Air Quality:

The main sources of air pollutants resulting from remediation activities are gases from combustion, particularly vehicle emissions, and fugitive dust generated by unpaved roads and earthworks. The impacts of the proposed action will be the same in each of the physiographic provinces of Nevada but permitted pollutant levels may vary by region and/or county.

Under the no action alternative there will not be any impacts to climate and air quality. Where remediation is done, impacts to climate and air quality could include the generation of dust and gaseous pollutants. Because surface disturbance is expected to be limited to small areas and because most sites are accessible by existing roads, impacts of remediation will be minimal. The short term nature of remediation work will preclude significant impacts from pollution.

Sites adjacent to population concentrations receive higher risk rankings. Many of these are expected to be in Clark and Washoe counties, which are non-attainment areas for PM_{10} air quality. Remediation activities in non-attainment areas shall not contribute to exceedances of local or national air quality standards for particulate matter. This may involve mitigation in the form of water application and prompt revegetation of disturbance.

Impacts on Geology and Topography:

Under the proposed action, physically hazardous orphaned mines would be secured either by fencing and/or gating with signing, or would be permanently closed by backfilling. Mineral exploration may be hindered by preventing access to or covering up mineral exposures, however,

the proposed action would not prevent the economic development of potential mineral deposits. Exploration activities would instead rely on drilling, geophysical methods, or historic data to evaluate backfilled mines.

Remediation activities could alter the topography of sites selected for securing. Most sites would be returned to predisturbance topographic patterns during reclamation. BLM will encourage the restoration of natural contours and topographies for all remediation efforts which alter these features.

Impacts on Soils:

Under the proposed action, topsoil would be affected through erosion resulting from the removal of vegetation and incomplete recovery of topsoil from areas to be disturbed for the building and placing of structures. Reclamation would require the operator to replace topsoil removed from facilities or substitute suitable growth media, but some losses may occur. BLM would require remediators to employ the erosion prevention and control techniques listed in the BLM Reclamation Manual. All human-made slopes would be designed to prevent sheetflow from runoff, and early vegetative cover would be encouraged to stabilize soil salvage piles and newly regraded surfaces.

The impacts of a specific remediation proposal will be analyzed for local physiographic conditions. BLM will review reclamation schedules (required under the subject regulations) to ensure that they consider and preserve soils found in the physiographic province where the remediation is planned. Remediations under the proposed action must also conform to BLM land use plans and have all necessary permits before they begin. These plans and permits, being local in nature, will account for soil differences between physiographic provinces.

Under the no action alternative, there may be impacts to soils resulting from conditions at unremediated sites.

Impacts on Water Resources:

In remediations involving surface disturbance, BLM would require reclamation plans that discuss in detail the proposed surface water runoff and erosion controls. Remediations under the proposed action must also conform to BLM land use plans and have all necessary permits before they begin. These plans and permits, being local in nature, will account for hydrologic differences between physiographic provinces.

Under the no action alternative, impacts to water resources could include contamination due to erosion, excessive consumption, illegal or improper retention structures and pollution in excess of permitted standards.

Impacts on Vegetation:

Under the proposed action, impacts to vegetation in areas would be limited to some loss of vegetation in areas of material removal, road construction, and material placement. This would be limited to sites where remediation involves more than simple fencing. This might allow noxious weeds to invade and establish, which would change the composition of native vegetation communities. BLM would require that all such areas be reclaimed according to procedures established in planning documents and/or the BLM Solid Mineral Reclamation Handbook (H-3042-1). BLM would require that revegetation consist of a diverse mix of native perennial species supportive of the proposed post-remediation land use. BLM inspectors would inspect all such areas to ensure that disturbed areas have been revegetated to establish a diverse, effective, and permanent vegetation and that no noxious weeds had invaded. Where noxious weeds are found, appropriate control measures shall be implemented.

Under the no action alternative, there will not be any impacts to vegetation.

Impacts on Wildlife:

Under the proposed action wildlife impacts would be limited to some potential loss of habitat which would be mitigated. While fences might restrict some movement of large wildlife on a very limited basis, this is expected to prevent fatalities from the same human safety hazards being remediated. There are not expected to be any losses of food resources, since areas of disturbance will be revegetated. No water sources will be impacted, since such sites are excluded from this EA. Through its inspection program, BLM would ensure that facilities and fences would not unnecessarily endanger or restrict wildlife. The nature and distribution of wildlife that might be affected by remediation cannot be predicted with precision at the programmatic level. These resources will be identified and assessed in BLM's local investigations of site-specific actions.

The impacts of a specific remediation proposal will be analyzed for local physiographic conditions. BLM will perform a site specific investigation to protect the local wildlife communities found in the physiographic province where the remediation is planned. Remediations under the proposed action must also conform to BLM land use plans and have all necessary permits before they begin. These plans and permits, being local in nature, will account for differences between physiographic provinces.

Under the no action alternative, there will not be any new impacts to wildlife. Impacts under this alternative would include continued wildlife losses due to the unremediated hazards. Habitat for threatened or endangered species could also be impacted or destroyed by human activities in unsecured sites.

Impacts on Wild Horses and Burros:

Under the proposed action few impacts to wild horses and burros are projected. BLM would ensure that facilities and fences would not unnecessarily endanger or restrict wild horses or burros.

Under the no action alternative, where hazards are not remediated there could be impacts to wild horses and burros due to the presence of unremediated safety hazards.

Impacts on Cultural Resources:

Under the proposed action BLM employees or other personnel permitted by the BLM will identify and evaluate all cultural resources before any surface disturbance is authorized. Any potential adverse effects of the remediation would be mitigated through the procedures described in the preceding section on archeological surveying.

Under the no action alternative, there could be impacts to cultural resources resulting from continued vandalism, theft, or alteration of unsecured sites.

Impacts on Wilderness Characteristics:

Under the proposed action, there could be minor impacts to wilderness values such as naturalness and primitive unconfined recreation. Solitude would not be impacted except during remediation activities.

Under the no action alternative, there would be no impact to wilderness values.

Impacts on Areas of Critical Environmental Concern:

Remediation activities in Areas of Critical Environmental Concern will conform to the management plans for these areas. Therefore, under the proposed action, any impacts will benefit the values for which these areas are managed, by enhancing human safety and in some cases eliminating hazards to wildlife species.

Impacts on Visual Resources and Recreation:

Visual values are identified through the visual resource management inventory and are considered with other resources in the resource management planning process. Under the proposed action, all proposals for remediation considered in this analysis must conform to land use plans. BLM will review each proposal to ensure that it complies with the land use plan. BLM will also work with the remediators to perform work in ways that do not detract from visual resources.

Impacts on Economic Conditions:

Under the proposed action, economic impacts may result in a few cases from the loss of access to mineral information. This would be limited to those sites which are backfilled. These sites are typically very dangerous and would be unlikely to be accessed by minerals prospectors in any case.

Economic impacts from the proposed action include less time and money spent on rescues and recoveries from secured AML sites, fewer medical expenses, and a reduction in public morbidity and mortality.

The proposed action will also benefit BLM by reducing the amount of time spent in preparing environmental assessments for remediation. Many proposals will conform to the proposed activities in the proposed action and will be analyzed as a group under this programmatic EA. Nevada Revised Statute 41.0331 provides immunity from civil liability to persons or state agencies for damages sustained in connection with the construction of fences or other safeguards around hazardous AML sites.

Impacts on the Social Environment and Public Safety:

Under the proposed action BLM will act to reduce the risk of injury or death to members of the public. Disturbance to historic, cultural, biological, and scenic resources will be minimized and mitigated. The reduction in loss of life and serious injury, as well as associated property loss is expected to be considerable.

Under the no action alternative impacts may increase due to the continued threats to human safety.

Cumulative Impacts:

About 155,000 AML sites are estimated to exist in Nevada. Of these, perhaps 50,000 pose physical threats to human safety. The number of remediations to which this EA will apply is unknown.

Most remediations will involve simple fencing and the posting of signs, which is expected to result in no cumulative impact. Those AML features which have the potential to serve as wildlife habitat and which will be remediated to prevent human access will be gated rather than backfilled. If gates are properly designed and installed, the cumulative impact on potentially impacted species will be minimal. Since there will be relatively few cases of backfilling and concomitant removal of fill material, the cumulative impact of such activity is expected to be minimal. In such cases, reclamation and revegetation will mitigate such impact.

Environmental Justice:

Comments were solicited by mail and public meetings from all Native American groups in the affected area. No other minority/low income groups were identified as potentially impacted.

Public Comment Summary and Response:

Approximately 60 unsigned FONSIs and supporting EAs were mailed to other Federal Agencies, State Agencies, County Agencies, representatives of the mining industry, and interested citizens. On October 11, 2000, news releases announcing the availability of the document were mailed to approximately 500 addresses including media outlets (newspapers, publications, TV and radio stations), Resource Advisory Council (RAC) members, county elected officials, and a variety of public interests. In accordance with 40 CFR 1501.4 (e), the BLM provided a 30-day comment period which closed on November 12, 2000. The EA was also discussed at a meeting between the Environmental Protection Agency, the BLM, and Native American representatives in Carson City, and at a meeting of Nevada's three RACs in Mesquite, Nevada. The EA was also displayed and distributed in the Public Room of the Department of Interior offices in Reno. Nine comment letters were received, of which seven were fully supportive of the EA. One comment from the Washoe Tribe of Nevada/California supporting the EA and requesting that should any Washoe cultural properties or human remains be uncovered during ground disturbance associated with the project, the work should be suspended and the tribe consulted regarding treatment of those objects. This was incorporated in the EA.

One comment letter opposing the EA was received. The writer deplored the lack of common sense of the public and expressed concern that the proposed action will hinder mineral development in the state. "To go all over the state, spending millions of dollars, evaluating each disturbance and applying this environmental formula is total nonsense and detrimental to mineral development." This comment is noted.

Agencies Consulted:

The Draft EA was distributed for internal review to all Field Offices in Nevada, as well as to program leads in the state office, and to the U.S. Fish and Wildlife Service.

Nevada State Clearinghouse (ten copies for distribution to state agencies).

Nevada Division of Environmental Protection

Nevada Division of Minerals

United States Fish and Wildlife Service

References:

Nevada BLM Special Status Species List, Instruction Memorandum No. NV-98-013, February 27, 1998

Master Memorandum of Understanding between Bat Conservation International, Inc., and the USDA Bureau of Land Management. 3/20/1993

Appendix One

BLM Nevada Special Status Species List

United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Nevada State Office
P.O. Box 12000
Reno, Nevada 89520-0006

IN REPLY REFER TO:
6840 (NV-930)

EMS TRANSMISSION
Instruction Memorandum No. NV-98-013
Expires: 9/30/99

February 27, 1998

To: District Managers, Nevada

From: Associate State Director, Nevada

Subject: Nevada Special Status Species List

The attached Nevada Special Status Species List includes several different categories of species, as follows:

I. Federally designated threatened, endangered, proposed, and candidate species;
II. State-protected species if in a category implying potential endangerment, extinction, extirpation, or local rarity;
III. Sensitive species---additional species designated by the State Director, in cooperation with the State of Nevada.

Please note that the list of Nevada State Protected Species (38 total) on pages 3 and 4, includes (1) only those State-protected animals that have been determined to meet Bureau of Land Management's (BLM) policy definition, and (2) all plant species designated by the State of Nevada as "critically endangered." Those 38 species are to be provided with the same level of protection and consideration as is provided for Federal candidate species, that is to "ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered." That same policy applies to all species contained in the Sensitive Species List on pages 5-10.

The Nevada BLM Sensitive Species List is currently being reviewed for revision and updating. All BLM Nevada Field Offices were provided a proposed list of species additions/deletions and asked for comments. This proposed list is also being reviewed by NDOW, USFWS, and the Nevada Department of Conservation and Natural Resources (NDCNR). The revised Sensitive Species List simply includes all species that BLM and NDCNR agree should receive special management emphasis.

If you have any questions regarding the attached list or related BLM policy, please contact Randy McNatt (702/785-6473) or Dave Pulliam (702/785-6471) of my staff at the Nevada State Office.

Signed By:
Jean Rivers-Council
Associate State Director

Authenticated By:
Ramona Delorme
Staff Assistant

Attachment
1. Nevada Special Status Species List (10pp)

NEVADA BLM SPECIAL STATUS SPECIES
(Updated 12/1/99)

I. FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES

Ia. FEDERALLY LISTED SPECIES (35 total)

Scientific Name	Common Name	Status*
Astragalus phoenix	Ash Meadows milkvetch	FT,SL
Centaurium namophilum	spring-loving centaury	FT,SL
Enceliopsis nudicaulis var. *corrugata*	Ash Meadows sunray	FT,SL
Eriogonum ovalifolium var. *williamsiae*	Steamboat buckwheat	FE,SL
Grindelia fraxino-pratensis	Ash Meadows gumplant	FT,SL
Ivesia kingii var. *eremica*	Ash Meadows ivesia	FT,SL
Mentzelia leucophylla	Ash Meadows blazingstar	FT,SL
Nitrophila mohavensis	Amargosa niterwort	FE,SL
Spiranthes diluvialis	Ute lady's tresses; plateau l. t.	FT,SL
Ambrysus amargosus	Ash Meadows naucorid bug	FT
Catostomus warnerensis	Warner sucker	FT
Chasmistes cujus	cui-ui	FE,SL
Crenichthys baileyi baileyi	White River springfish	FE,SL
Crenichthys baileyi grandis	Hiko White River springfish	FE
Crenichthys nevadae	Railroad Valley springfish	FT,SL
Cyprinodon diabolis	Devil's Hole pupfish	FE,SL
Cyprinodon nevadensis mionectes	Ash Meadows Amargosa pupfish	FE,SL
Cyprinodon nevadensis pectoralis	Warm Springs Amargosa pupfish	FE,SL
Empetrichthys latos	Pahrump poolfish; Pahrump killifish	FE,SL
Eremichthys acros	desert dace	FT,SL
Gila elegans	bonytail chub	FE,SL
Gila robusta jordani	Pahranagat roundtail chub	FE,SL
Gila robusta seminuda	Virgin River chub	FE,SL
Gopherus agassizii	desert tortoise	FT,SL
Lepidomeda albivallis	White River spinedace	FE,SL
Lepidomeda mollispinis pratensis	Big Spring spinedace	FT,SL
Moapa coriacea	Moapa dace	FE,SL
Oncorhynchus clarki henshawi	Lahontan cutthroat trout	FT
Plagopterus argentissimus	woundfin	FE,SL
Rhinichthys osculus lethoporus	Independence Valley speckled dace	FE,SL
Rhinichthys osculus nevadensis	Nevada speckled dace	FE,SL

Rhinichthys osculus oligoporus	Clover Valley speckled dace	FE,SL
Salvelinus confluentis	bull trout	FE
Xyrauchen texanus	razorback sucker	FE,
Haliaeetus leucocephalus	Bald Eagle	FT,SL

Ib. FEDERALLY PROPOSED SPECIES (1 total)

Charadrius montanus	Mountain Plover	PT

Ic. FEDERAL CANDIDATE SPECIES (6 total)

Policy (BLM Manual section 6840.06 C states: "BLM shall carry out management, consistent with the principles of multiple use, for the conservation of candidate species and their habitats and shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered."

Rana pretiosa	spotted frog	C
Astragalus oophorus var. *clokeyanus*	Clokey eggvetch	C
Eriogonum argophyllum	Sulphur Springs buckwheat; Ruby Valley b.; silverleaf b.	C,SL
Opuntia whipplei var. *multigeniculata*	Blue Diamond cholla	C,SL
Rorippa subumbulata	Tahoe yellow-cress	C,SL

*Status

FE-Federally endangered
FT-Federally threatened
PT-Proposed threatened
C-Candidate
SL-Listed by the State of Nevada in a category implying potential endangerment or extinction

IIa. NEVADA STATE PROTECTED ANIMALS (25 total) THAT MEET BLM'S 6840 POLICY DEFINITION

Species of animals occurring on BLM-managed lands in Nevada that are: (1) "protected" under authority of NAC 501.100 - 503.104; (2) also have been determined to meet BLM's policy definition of "listing by a State in a category implying potential endangerment or extinction"; and (3) are not already included as BLM Special Status Species under federally listed, proposed, or candidate species. Nevada BLM policy is to

provide these species with the same level of protection as is provided for candidate species in BLM Manual 6840.06 C.

Scientific Name	Common Name
Mammals (1 total)	
Euderma maculatum	spotted bat
Birds (8 total)	
Aquila chrysaetos	Golden Eagle
Accipiter gentilis	Goshawk
Buteo regalis	Ferruginous Hawk
Buteo swainsoni	Swainson's Hawk
Pandion haliaetus	Osprey
Pelecanus erythrorhynchos	White Pelican
Plegadis chihi	White-faced ibis
Speotyto cunicularia	Burrowing Owl
Reptiles (1 total)	
Heloderma suspectum	Gila monster
Fishes (15 total)	
Catostomus clarki intermedius	White River desert sucker
Catostomus clarki ssp.	Meadow Valley Wash desert sucker .
Crenichthys baileyi albivallis	Preston White River springfish
Gila bicolor euchila	Fish Creek Springs tui chub
Gila bicolor newarkensis	Newark Valley tui chub
Gila bicolor ssp.	Big Smoky Valley tui chub
Gila bicolor ssp.	Fish Lake Valley tui chub
Gila bicolor ssp.	Railroad Valley tui chub
Gila robusta seminuda (Moapa River population only)	Virgin River chub
Lepidomeda mollispinis mollispinis	Virgin River spinedace
Relictus solitarius	relict dace
Rhinichthys osculus lariversi	Big Smoky Valley speckled dace
Rhinichthys osculus moapae	Moapa speckled dace
Rhinichthys osculus velifer	Pahranagat speckled dace
Rhinichthys osculus ssp.	Monitor Valley speckled dace

IIa. NEVADA STATE PROTECTED ANIMALS THAT MEET BLM'S 6840 POLICY DEFINITION (CONTINUED)

IIb. NEVADA STATE PROTECTED PLANTS (13 total)

Species of plants occurring on BLM-managed lands that are protected under authority of NRS 527.270 - .300 because of potential endangerment or extinction, but are not already included as BLM Special Status Species under Federally listed, proposed, or candidate species. Nevada BLM policy is to provide these species with the same level of protection as is provided for candidate species in BLM Manual 6840.06 C.

Scientific Name	Common Name
Arctomecon californica	California bearpoppy; bearclaw poppy
Astragalus beatleyae	Beatley milkvetch
Astragalus geyeri var. *triquetrus*	threecorner milkvetch
Astragalus mohavensis var. *hemigyrus*	halfring milkvetch; curvepod Mojave m.; Darwin Mesa m.
Astragalus yoder-williamsii	Osgood Mountains milkvetch; Yoder-Williams m.
Castilleja salsuginosa	Monte Neva paintbrush
Cryptantha insolita	unusual catseye; Las Vegas cryptantha
Eriogonum viscidulum	sticky buckwheat; clammy b.
Frasera gypsicola	Sunnyside green gentian; S. elkweed
Phacelia inconspicua	obscure scorpion plant
Polyctenium williamsiae	Williams combleaf
Primula capillaris	Ruby Mountain primrose
Rorippa subumbellata	Tahoe yellowcress; T. watercress

III. NEVADA BLM SENSITIVE SPECIES LIST---Species designated by the State Director, in cooperation with the State of Nevada Department of Conservation and Natural Resources, that are not already included as BLM Special Status Species under (1) Federally listed, proposed, or candidate species; or (2) State of Nevada listed species. BLM policy is to provide these species with the same level of protection as is provided for candidate species in BLM Manual 6840.06 C.

Scientific Name	Common Name
Mammals (17 total)	
Eumops perotis californicus	greater western mastiff bat

Idionycteris phyllotis (= *Plecotus p.*)	Allen's big-eared bat
Macrotus californicus	California leaf-nosed bat
Microtus montanus fucosus	Pahranagat Valley montane vole
Microtus montanus nevadensis	Ash Meadows montane vole
Myotis ciliolabrum	small-footed myotis
Myotis evotis	long-eared myotis
Myotis thysanodes	fringed myotis
Myotis velifer	cave myotis
Myotis volans	long-legged myotis
Myotis yumanensis	Yuma myotis
Nyctinomops macrotis (= *Tadarida m., T. molossa*)	big free-tailed bat
Plecotus townsendii pallescens	pale Townsend's big-eared bat
Plecotus townsendii townsendii	Pacific Townsend's big-eared bat
Sorex preblei	Preble's shrew
Thomomys umbrinus abstrusus	Fish Spring pocket gopher
Thomomys umbrinus curtatus	San Antonio pocket gopher

Birds (5 total)

Chlidonias niger	Black Tern
Charadrius alexandrinus nivosus	Western Snowy Plover
Centrocercus urophasianus	Western Sage Grouse
Oreortyx pictus	Mountain quail
Phainopepla nitens	Phainopepla

Reptiles (1 total)

Sauromalus obesus	Chuckwalla

Amphibians (2 total)

Bufo microscaphus microscaphus	Arizona toad
Bufo nelsoni	Amargosa toad

Fishes (10 total)

Catostomus latipinnis	flannelmouth sucker
Catostomus sp.	Wall Canyon sucker
Crenichthys baileyi thermophilus	Moorman White River springfish
Gila bicolor ssp.	Hot Creek Valley tui chub
Gila bicolor isolata	Independence Valley tui chub
Lepidomeda mollispinis mollispinis	Virgin River spinedace
Oncorhyncus clarki utah	Bonneville cutthroat trout
Oncorhyncus mykiss gibbsi	interior redband trout
Rhinichthys osculus ssp.	Meadow Valley Wash speckled dace

Rhinichthys osculus ssp	Oasis Valley speckled dace
Snails (7 total)	
Fluminicola merriami	Pahranagat pebblesnail
Oreohelix nevadensis	Schell Creek mountainsnail
Pyrgulopsis micrococcus	Oasis Valley springsnail
Pyrgulopsis wongi	Wongs springsnail
Pyrgulopsis sp.	Red Rocks springsnail #1
Pyrgulopsis sp.	Red Rocks springsnail #2
Tryonia clathrata	grated tryonia
Clams & Mussels (1 total)	
Anodonta californiensis	California floater
True Bugs (1 total)	
Pelocoris shoshone shoshone	Pahranagat naucorid bug
Beetles (12 total)	
Aegialia crescenta	Crescent Dune aegialian scarab
Aegialia hardyi	Hardy's aegialian scarab
Aegialia magnifica	large aegialian scarab
Aphodius sp.	Crescent Dune aphodius scarab
Aphodius sp	Big Dune aphodius scarab
Aphodius sp.	Sand Mountain aphodius scarab
Miloderes sp.	Rulien's miloderes weevil
Pseudocotalpa giulianii	Giuliani's dune scarab
Serica sp.	Sand Mountain serican scarab
Serica sp.	Crescent Dune serican scarab
Stenelmis calida calida	Devils Hole warm spring riffle beetle
Stenelmis calida moapa	Moapa warm spring riffle beetle
Butterflies & Moths (18 total)	
Cercyonis pegala	Carson Valley wood nymph
Cercyonis pegala ssp.	White River wood nymph
Chlosyne acastus	Spring Mountains acastus checkerspot
Euphilotes battoides ssp.	Baking Powder Flat blue
Euphilotes enoptes ssp.	Spring Mountains dark blue
Euphilotes palliscens ssp.	Sand Mountain blue
Euphilotes rita mattonii	Mattoni's blue
Euphydryas editha monoensis	Mono checkerspot
Hesperia comma ssp.	Spring Mountains comma skipper
Hesperia uncas ssp.	Railroad Valley skipper

Hesperopsis gracielae	MacNeill sooty wing skipper
Icaricia icarioides	Spring Mountains icarioides blue
Limenitis archippus lahontani	Nevada viceroy
Limenitis weidemeyerii nevadae	Nevada admiral
Phyciodes pascoensis ssp.	Steptoe Valley crescentspot
Polites sabuleti sinemaculata	Denio sandhill skipper
Speyeria atlantis greyi	Grey's silverspot
Speyeria nokomis ssp.	Carson Valley silverspot

Plants (98 total)

Angelica scabrida	rough angelica
Antennaria arcuata	meadow pussytoes
Arabis bodiensis	Bodie Hills rockcress
Arabis falcatoria	Grouse Creek rockcress
Arabis falcifructa	Elko rockcress
Arabis ophira	Ophir rockcress
Arctomecon merriamii	white bearpoppy; merriam b.
Asclepias eastwoodiana	Eastwood milkweed
Astragalus aequalis	Clokey milkvetch; equal m.
Astragalus amphioxys var. *musimonum*	Sheep Mountain milkvetch; crescent m.
Astragalus anserinus	Goose Creek milkvetch
Astragalus eurylobus	Needle Mountains milkvetch; Peck Station m.
Astragalus funereus	black woollypod; Funeral milkvetch; black m.; Rhyolite m.
Astragalus gilmanii	Gilman milkvetch
Astragalus inyoensis	Inyo milkvetch
Astragalus mokiacensis	Mokiak milkvetch
Astragalus oophorus var. *lavinii*	Lavin eggvetch
Astragalus oophorus var. *lonchocalyx*	long-calyx eggvetch; pink e.
Astragalus remotus	Spring Mountain milkvetch
Astragalus robbinsii var. *occidentalis*	Lamoille Canyon milkvetch; Ruby m.; Robbin's western m.
Astragalus solitarius	lonesome milkvetch; weak m.
Astragalus tiehmii	Tiehm milkvetch
Astragalus toquimanus	Toquima milkvetch
Astragalus uncialis	Currant milkvetch
Botrychium crenulatum	dainty moonwort; crenulate m.
Calochortus striatus	alkali mariposa lily; striped m. l.
Camissonia megalantha	Cane Spring evening-primrose
Chrysothamnus eremobius	remote rabbitbrush; Pintwater r.
Collomia renacta	Barren Valley collomia

Cordylanthus tecopensis	Tecopa birdsbeak
Cryptantha schoolcraftii	Schoolcraft catseye
Cryptantha welshii	White River catseye; Welsh c.
Cusickiella quadricostata	Bodie Hills draba; four-rib whitlowgrass
Cymopterus goodrichii	Goodrich biscuitroot; G. parsley
Cymopterus ripleyi var. *saniculoides*	sanicle biscuitroot; Ripley b.
Didymodon nevadensis	Gold Butte moss
Enceliopsis argophylla	silver leaf sunray
Epilobium nevadense	Nevada willowherb
Erigeron latus	broad fleabane
Erigeron ovinus	sheep fleabane
Eriogonum anemophilum	windloving buckwheat
Eriogonum bifurcatum	Pahrump Valley buckwheat; forked b.
Eriogonum corymbosum var. *aureum*	golden buckwheat
Eriogonum crosbyae	Crosby buckwheat
Eriogonum heermannii var. *clokeyi*	Clokey buckwheat
Eriogonum lewisii	Lewis buckwheat
Eriogonum prociduum	prostrate buckwheat; Austin b.
Eriogonum robustum	altered andesite buckwheat; Lobb b.
Eriogonum tiehmii	Tiehm buckwheat
Frasera pahutensis	Pahute green gentian; P. elkweed
Galium hilendiae ssp. *kingstonense*	Kingston bedstraw
Glossopetalon pungens var. *glabra*	smooth dwarf greasebush
Glossopetalon pungens var. *pungens*	dwarf greasebush
Haplopappus graniticus	Lone Mountain tonestus
Ionactis caelestis	Red Rock Canyon aster
Ivesia aperta var. *aperta*	Sierra Valley ivesia
Ivesia arizonica var. *saxosa*	rock purpusia
Ivesia jaegeri	Jaeger ivesia
Ivesia pityocharis	Pine Nut Mountains ivesia; P.N.M. mousetails
Ivesia rhypara var. *rhypara*	grimy ivesia
Ivesia webberi	Webber ivesia
Jamesia tetrapetala	waxflower
Lathyrus grimesii	Grimes vetchling
Leptodactylon glabrum	Bruneau River prickly phlox; Owyhee p.p.
Lomatium graveolens var. *clarkii*	Clark parsley
Lupinus holmgrenanus	Holmgren lupine
Mentzelia mollis	smooth stickleaf
Mentzelia packardiae	Packard stickleaf
Oryctes nevadensis	oryctes

Penstemon albomarginatus	white-margined beardtongue
Penstemon arenarius	Nevada dune beardtongue
Penstemon bicolor ssp. *bicolor*	yellow twotone beardtongue
Penstemon concinnus	Tunne Springs beardtongue
Penstemon floribundus	Cordelia beardtongue
Penstemon fruticiformis ssp. *amargosae*	Death Valley beardtongue; Amargosa bush penstemon
Penstemon pahutensis	Pahute Mesa beardtongue
Penstemon pudicus	bashful beardtongue
Phacelia beatleyae	Beatley scorpion plant
Phacelia minutissima	least phacelia; dwarf phacelia
Phacelia monoensis	Mono phacelia
Phacelia parishii	Parish phacelia; playa p.
Pinus washoensis	Washoe pine
Polyctenium fremontii var. *confertum*	crowded combleaf
Porophyllum pygmaeum	pygmy poreleaf
Potentilla basaltica	Soldier Meadows cinquefoil; basalt cinquefoil
Potentilla cottamii	Cottam cinquefoil
Salvia dorrii var. *clokeyi*	Clokey mountain sage; C. purple sage
Sclerocactus blainei	Blaine pincushion; B. fishhook cactus
Sclerocactus nyensis	Nye pincushion
Sclerocactus schlesseri	Schlesser pincushion; S. fishhook cactus
Silene nachlingerae	Jan's catchfly; Nachlinger catchfly
Sphaeralcea caespitosa	Jones globemallow
Streptanthus oliganthus	Masonic Mountain jewelflower; M. M. twistflower
Stroganowia tiehmii	Tiehm stroganowia
Townsendia jonesii var. *tumulosa*	Charleston grounddaisy
Trifolium andinum var. *podocephalum*	Currant Summit clover
Trifolium leibergii	Leiberg clover
Viola lithion	rock violet

Appendix Two

Master Memorandum of Understanding between

Bat Conservation International

and the

USDI Bureau of Land Management

MASTER MEMORANDUM OF UNDERSTANDING
between
BAT CONSERVATION INTERNATIONAL
and the
USDI BUREAU OF LAND MANAGEMENT

I. AUTHORITY:

This MEMORANDUM OF UNDERSTANDING (MOU) is made and entered into by and between BAT CONSERVATION INTERNATIONAL, hereinafter referred to as BCI, and the BUREAU OF LAND MANAGEMENT, U.S. Department of the Interior, hereinafter referred to as the BLM, under the provisions of section 307(b) of the Federal Land Policy and Management Act (43 U.S.C. section 1737(b)) and P.L. 98-540 (98 Stat. 2718).

II. PURPOSE:

The purpose of this MOU is to provide a framework for cooperative activities necessary to maintain and enhance the productivity of bats and their habitats on public lands administered by the BLM, in order to improve wildlife habitat management in the best interest of the people of the United States.

III. INTRODUCTION:

Both BCI and the BLM have responsibilities and interests in the management of wildlife and their habitat. The parties agree that wildlife habitats need to be conserved and managed to protect wildlife and to meet the growing public demand for wildlife conservation and related scientific opportunities.

The BLM manages local and regional habitat for over 3,000 species of wildlife and fish resources in many areas of the Western US. Various species of wildlife are priority species for management in many BLM management plans in those areas. The BLM lands provide abundant opportunities for enhancement and maintenance of important bat habitats. The BLM lands are managed on the basis of multiple use, including wildlife habitat, according to scientific wildlife management principles.

Numerous cooperative opportunities are outlined in BLM strategic plans, for the conservation and management of wildlife and special status species on public lands. These strategic plans were developed to facilitate implementation of Fish and Wildlife 2000.

BCI was formed to promote conservation of bats and their contribution to the environment, to contribute to the study of bats in their natural habitat, to contribute to the development of improved methods of population studies of bats, and to educate people about the valuable roles and needs of bats. BCI provides information and services to bat scientists, land managers and the public and otherwise solicits and receives donations and funds for the accomplishment of its purposes.

BCI desires to assist the BLM, or have assistance provided through contracts or agreements for the primary purpose of inventorying, monitoring, enhancing the productivity of bats and their habitats, and educating the public as to the roles and values of bats in ecosystem or BLM administered public lands.

It is the desire of both parties to cooperate fully with each other in matters relating to the inventory and monitoring of key bat habitats, education, research and management improvement of bat habitats through development and maintenance activities on BLM lands.

NOW THEREFORE, in consideration of the above premises, the parties agree as follows:

IV. BCI SHALL:

1. Meet at least annually with representatives of the BLM to discuss and agree on guidelines for project proposals to meet the purposes of this agreement.

2. Provide expertise, as well as labor, materials, and/or funds for the implementation of agreed-upon inventory, monitoring, habitat projects, education, or research efforts as feasible and in accordance with BCI policy.

3. Enter into specific collection or donation agreements, volunteer agreements, or contracts with the BLM to accomplish agreed-upon work which will be developed supplemental to this agreement. Such work may include: inventorying, monitoring, habitat projects, education, or research projects.

4. Not refer to this MOU in commercial advertising in a manner which states or implies that the activities of the BCI are approved or endorsed by BLM.

5. Submit for review to BLM prior to release any proposed releases to the public media which reference this MOU or any employee of the BLM or the Department of the Interior.

V. BLM SHALL:

1. Make BLM administered public lands available for the furtherance of this partnership, subject to applicable Federal laws, regulations, land use and activity plans for the affected area, and subject to approval by the authorized officer of the BLM for the area involved.

2. Provide leadership for the planning, implementation, and monitoring of work undertaken pursuant to this agreement and/or supplemental to this agreement.

3. Conduct an annual meeting with BCI representatives to discuss and reach an agreement on project proposals to meet the purposes of this agreement.

4. Provide BCI representatives at the end of each fiscal year with a State Office summary report of project accomplishments with funds deposited under collection agreements executed supplemental to this agreement.

5. Assume operation and maintenance and other management costs and responsibilities upon completion of bat conservation development projects located on BLM lands or, after notification of BCI representatives, enter into agreements with appropriate organizations, including BCI for such operation and maintenance.

6. Enter into specific agreements (including volunteer, collection, and donation agreements) or contracts with BCI or other parties to accomplish agreed upon work projects, which are supplemental to this agreement.

7. Coordinate project planning with appropriate State agencies to ensure that planned projects are consistent with State management objectives for wildlife.

VI. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE SAID PARTIES THAT:

1. Each project requiring a payment of funds by BCI to the BLM will be documented and signed by the responsible organizational unit line officer of the BLM and a BCI representative using an appropriate agreement. Funds provided by BCI are intended to supplement monies already earmarked for bat conservation or other wildlife resource management by BLM and are not to be used to reduce present or future BLM budgets.

2. Special matching fund projects will be documented via cooperative agreements and signed by the responsible organizational unit line officer and BCI representatives.

3. All improvements placed on BLM land at the direction of either of the parties shall thereupon become the property of the United States, and shall be subject to the same regulations and administration of the BLM as all other BLM improvements of a similar nature. BCI will be notified by the BLM District Manager of any proposed major change in management of the lands affected by the improvement projects prior to any change in management emphasis.

4. This agreement in no way restricts the BLM from participating with other public and private agencies, organizations, and individuals or from accepting contributions and gifts for the improvement, development, administration, operation, and maintenance of wildlife habitats.

5. Nothing in this agreement shall be construed as obligating the BLM or BCI to expend money, or as involving the United States in any obligation for the present or future payment of money in excess of appropriations authorized by law and administratively allocated for work undertaken pursuant to this agreement and/or supplemental to this agreement.

6. The Government's tort liability shall be governed by the provisions of the Federal Tort Claims Act (28 U.S.C. 2671-80).

7. This agreement may be revised, as necessary, by the issuance of a written amendment, consented to, signed and dated by both parties.

8. Either party may terminate this agreement by providing 60 days written notice.

9. Nothing in this MOU shall be construed as giving BCI or BLM any type of exclusive arrangements to the exclusion or detriment of other interested groups or organizations.

10. No part of this MOU or supplements hereto shall entitle BCI or BLM to any share of interest in activities other than those provided by applicable laws and regulations.

11. During the performance of work undertaken pursuant to this MOU, any supplements hereto, or any specific agreement entered into pursuant to the authority of this MOU, the parties shall not discriminate on the grounds of race, color creed, gender, age, physical, handicap or national origin.

VII. EFFECTIVE DATE:

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the last written date below.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Director

5-20-93
Date

BAT CONSERVATION INTERNATIONAL

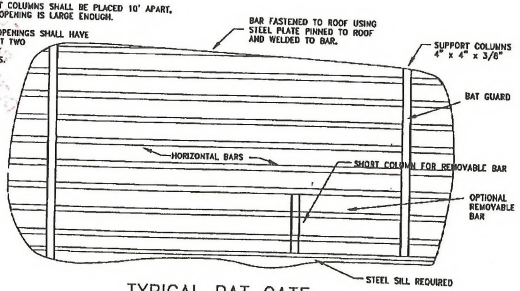
President

3/20/93
Date

Appendix Three

Sample Bat Gate Design Specifications

BLM LIBRARY
BLDG 50, ST-150A
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, COLORADO 80225


SUPPORT COLUMNS SHALL BE PLACED 10' APART. IF THE OPENING IS LARGE ENOUGH.
SMALL OPENINGS SHALL HAVE AT LEAST TWO SUPPORT COLUMNS.
BAR FASTENED TO ROOF USING STEEL PLATE PINNED TO ROOF AND WELDED TO BAR.
SUPPORT COLUMNS 4" x 4" x 3/8"
BAT GUARD
HORIZONTAL BARS
SHORT COLUMN FOR REMOVABLE BAR
OPTIONAL REMOVABLE BAR
STEEL SILL REQUIRED

TYPICAL BAT GATE
BACK ELEVATION VIEW

NOT TO SCALE

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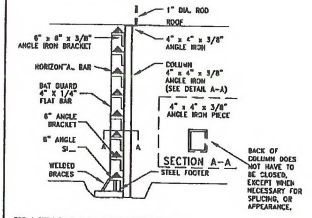
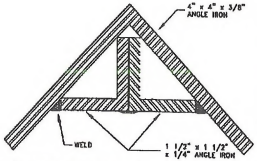

1" DIA. ROD
ROOF
6" x 6" x 3/8" ANGLE IRON BRACKET
4" x 4" x 3/8" ANGLE IRON
HORIZONTAL BAR
COLUMN 4" x 4" x 3/8" ANGLE IRON (SEE DETAIL A-A)
BAT GUARD 4" X 1/4" FLAT BAR
4" x 4" x 3/8" ANGLE IRON PIECE
6" ANGLE BRACKET
8" ANGLE SI...
A
A
SECTION A-A
WELDED BRACES
STEEL FOOTER
BACK OF COLUMN DOES NOT HAVE TO BE CLOSED, EXCEPT WHEN NECESSARY FOR SPLICING, OR APPEARANCE.
FOR ALTERNATE FOOTER, REFER TO SILL DETAIL 1

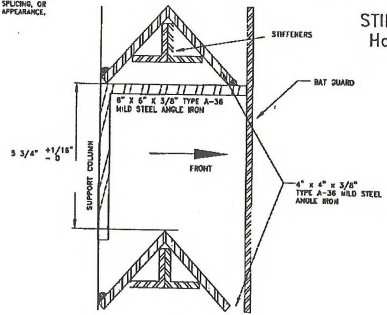
END SUPPORT COLUMN

NOT TO SCALE


4" x 4" x 3/8" ANGLE IRON
WELD
1 1/2" x 1 1/2" x 1/4" ANGLE IRON
STIFFENERS RUN THE FULL LENGTH OF THE HORIZONTAL BAR, EXCEPT FOR BEING 2" SHORTER ON EACH END.

STIFFENER DETAIL Horizontal Bars

NOT TO SCALE


STIFFENERS
BAT GUARD
6" X 6" X 3/8" TYPE A-36 MILD STEEL ANGLE IRON
5 3/4" +1/16" -0
SUPPORT COLUMN
FRONT
4" x 4" x 3/8" TYPE A-36 MILD STEEL ANGLE IRON

HORIZONTAL BAR SPACING TYPICAL DETAIL

NOT TO SCALE

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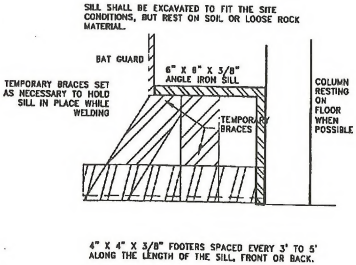
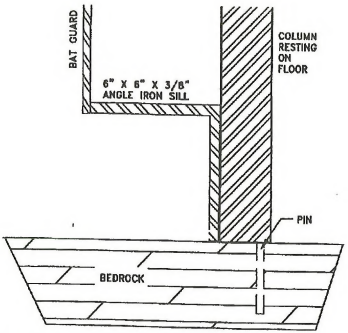

SILL SHALL BE EXCAVATED TO FIT THE SITE CONDITIONS, BUT REST ON SOIL OR LOOSE ROCK MATERIAL.
BAT GUARD
6" X 6" X 3/8" ANGLE IRON SILL
TEMPORARY BRACES SET AS NECESSARY TO HOLD SILL IN PLACE WHILE WELDING
TEMPORARY BRACES
COLUMN RESTING ON FLOOR WHEN POSSIBLE
4" X 4" X 3/8" FOOTERS SPACED EVERY 3' TO 5' ALONG THE LENGTH OF THE SILL, FRONT OR BACK.

SILL DETAIL 1

NOT TO SCALE



SILL DETAIL FOR BEDROCK FLOOR

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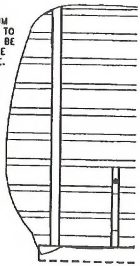
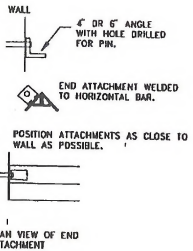
NOTE 1

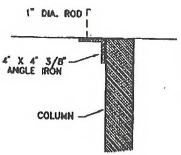
EACH END SHALL HAVE A MINIMUM OF TWO OF THE BARS ATTACHED TO THE WALL. ATTACHMENTS SHALL BE SPACED AT 25% AND 75% OF THE HEIGHT, AS A GENERAL GUIDELINE.

NOTE 2

END ATTACHMENT MUST BE USED ON BARS WHICH EXTEND MORE THAN 30" BEYOND COLUMNS.




WALL
4" OR 6" ANGLE WITH HOLE DRILLED FOR PIN.
END ATTACHMENT WELDED TO HORIZONTAL BAR.
POSITION ATTACHMENTS AS CLOSE TO WALL AS POSSIBLE.
PLAN VIEW OF END ATTACHMENT



COLUMN ATTACHMENT DETAIL

ATTACHMENT DETAILS

NOT TO SCALE

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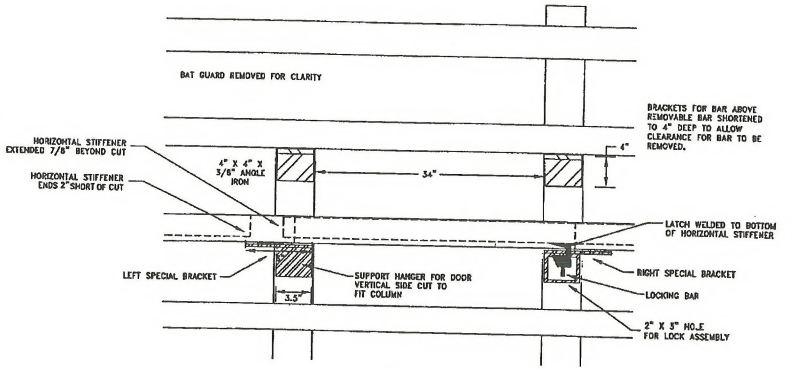
BAT GUARD REMOVED FOR CLARITY
BRACKETS FOR BAR ABOVE REMOVABLE BAR SHORTENED TO 4" DEEP TO ALLOW CLEARANCE FOR BAR TO BE REMOVED.
HORIZONTAL STIFFENER EXTENDED 7/8" BEYOND CUT
HORIZONTAL STIFFENER ENDS 2" SHORT OF CUT
4" X 4" X 3/8" ANGLE IRON
34"
4"
LATCH WELDED TO BOTTOM OF HORIZONTAL STIFFENER
LEFT SPECIAL BRACKET
SUPPORT HANGER FOR DOOR VERTICAL SIDE CUT TO FIT COLUMN
3.5"
RIGHT SPECIAL BRACKET
LOCKING BAR
2" X 3" HOLE FOR LOCK ASSEMBLY

DOOR DETAIL
FRONT ELEVATION VIEW

NOT TO SCALE

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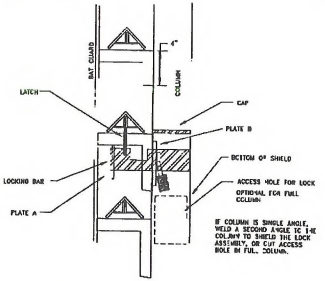
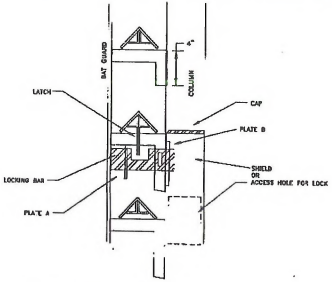
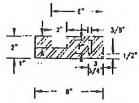


PROFILE VIEW OF LATCH IN LOCKED POSITION



PROFILE VIEW OF LATCH IN OPEN POSITION

NOT TO SCALE



LOCKING BAR DETAIL

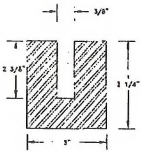


PLATE A

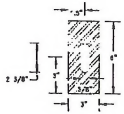


PLATE B

LATCH DETAILS

NOT TO SCALE

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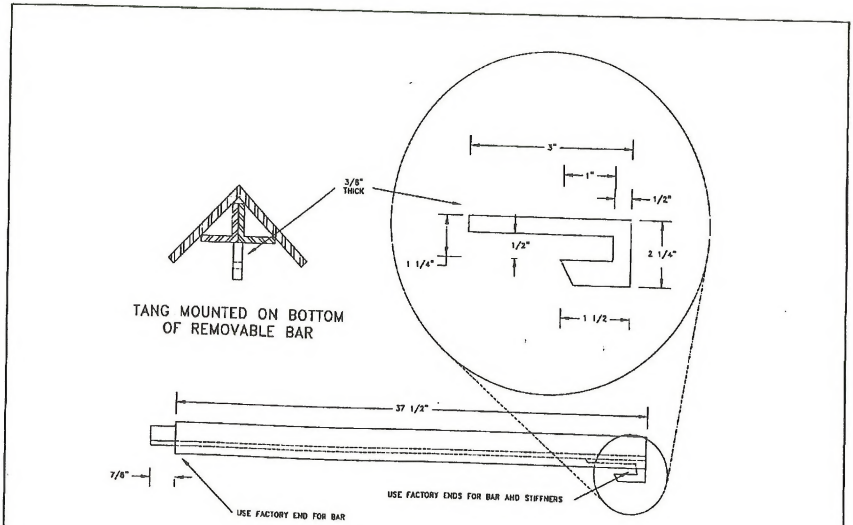

REMOVABLE BAR DETAIL

NOT TO SCALE

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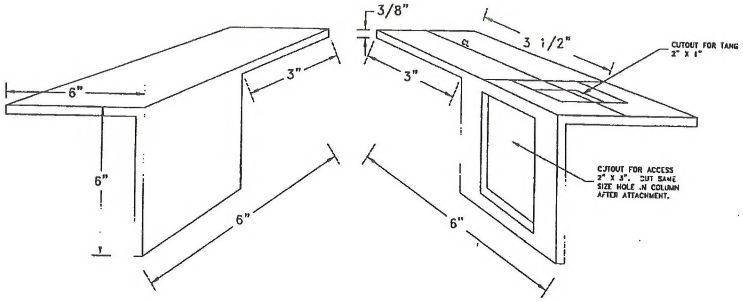

LEFT HANGER

RIGHT HANGER

SPECIAL BRACKETS FOR SUPPORTING REMOVABLE BARS

NOT TO SCALE

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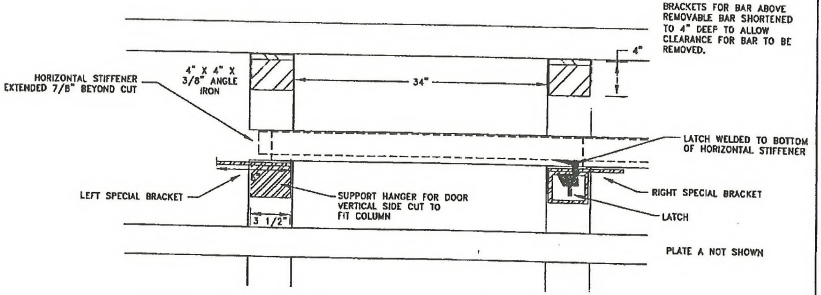
BRACKETS FOR BAR ABOVE REMOVABLE BAR SHORTENED TO 4" DEEP TO ALLOW CLEARANCE FOR BAR TO BE REMOVED.
4"
HORIZONTAL STIFFENER EXTENDED 7/8" BEYOND CUT
4" X 4" X 3/8" ANGLE IRON
34"
LATCH WELDED TO BOTTOM OF HORIZONTAL STIFFENER
LEFT SPECIAL BRACKET
SUPPORT HANGER FOR DOOR VERTICAL SIDE CUT TO FIT COLUMN
RIGHT SPECIAL BRACKET
LATCH
3 1/2"
PLATE A NOT SHOWN

1. PLACE REMOVABLE BAR ON BRACKETS AND CHECK LOCATIONS FOR LATCH, PLATES A AND B.
2. SET RIGHT SIDE HORIZONTAL BAR TO FIT AGAINST RIGHT SIDE OF REMOVABLE BAR.
3. SET LEFT SIDE HORIZONTAL BAR TO FIT AGAINST LEFT END OF REMOVABLE BAR.

ASSEMBLY SEQUENCE FOR REMOVABLE BAR
FRONT ELEVATION VIEW

NOT TO SCALE

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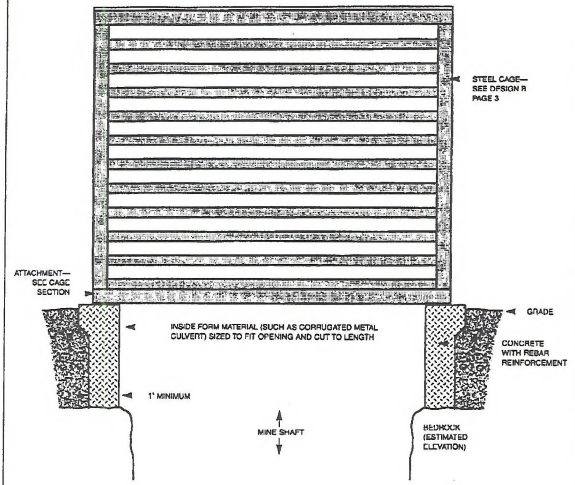
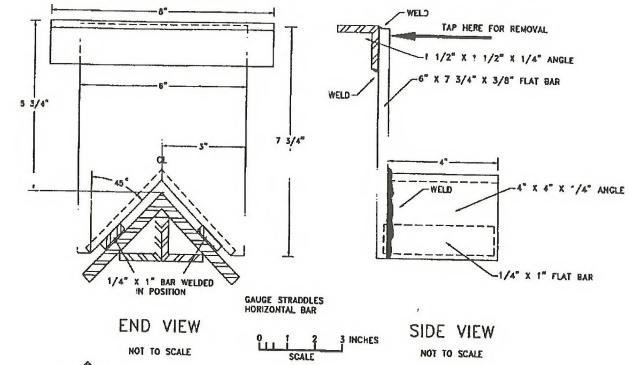


VERTICAL SHAFT & CAGE CROSS-SECTION

NOT TO SCALE



HORIZONTAL BAR SPACING GAUGE

(MINIMUM OF 3 NEEDED)

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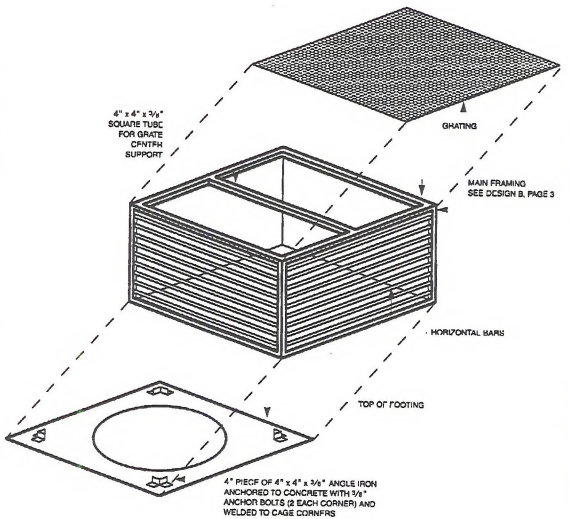
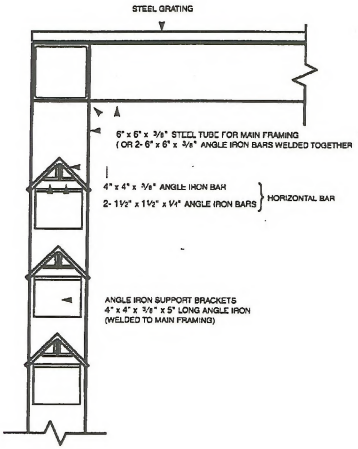

4" x 4" x 3/8" SQUARE TUBE FOR GRATE CENTER SUPPORT
GRATING
MAIN FRAMING SEE DESIGN B, PAGE 3
HORIZONTAL BARS
TOP OF FOOTING
4" PIECE OF 4" x 4" x 3/8" ANGLE IRON ANCHORED TO CONCRETE WITH 3/8" ANCHOR BOLTS (2 EACH CORNER) AND WELDED TO CAGE CORNERS

CAGE ASSEMBLY SCHEMATIC

NOT TO SCALE


STEEL GRATING
6" x 6" x 3/8" STEEL TUBE FOR MAIN FRAMING
(OR 2- 6" x 6" x 3/8" ANGLE IRON BARS WELDED TOGETHER
4" x 4" x 3/8" ANGLE IRON BAR
2- 1½" x 1½" x ¼" ANGLE IRON BARS
HORIZONTAL BAR
ANGLE IRON SUPPORT BRACKETS
4" x 4" x 3/8" x 5" LONG ANGLE IRON
(WELDED TO MAIN FRAMING)

CAGE SECTION

NOT TO SCALE

Appendix Four

Nevada Noxious Weed List 2000

NEVADA NOXIOUS WEED LIST		
Common Name	***Latin Name***	**Other Name(s)**
Austrian fieldcress	*Rorippa austriaca*	Swaisonpea
Austrian peaweed	*Sphaerophysa salsula*	
Black henbane	*Hyoscyamus niger*	
Camelthorn	*Alhagi pseudalhagi*	*A. camelorum*
Canada thistle	*Cirsium arvense*	
Carolina Horsenettle	*Solanum carolinense*	
Common crupina	*Crupina vulgaris*	
Common St. Johnswort	*Hypercium perforatum*	Goatweed; Klamath weed
Dalmation toadflax	*Linaria genistifolia ssp. dalmatica*	
Diffuse knapweed	*Centaurea diffusa*	
Dyer's woad	*Isatis tinctoria*	
Hoary cress	*Cardaria draba*	whitetop
Houndstongue	*Cynoglossum officinale*	
Iberian starthistle	*Centaurea iberica*	
Johnsongrass	*Sorghum halepense*	Perennial sorghum
Leafy spurge	*Euphorbia esula*	
Mediterranean sage	*Salvia aethiopis*	
Medusahead	*Taeniatherum caput-medusae*	Medusahead rye
Musk thistle	*Carduus nutans*	
Perennial pepperweed	*Lepidium latifolium*	Tall whitetop
Perennial sowthistle	*Sonchus arvensis*	
Poison Hemlock	*Conium maculatum*	
Puncturevine	*Tribulus terrestris*	
Purple loosestrife	*Lythrum salicaria*	Purple lythrum

NEVADA NOXIOUS WEED LIST		
Common Name	***Latin Name***	**Other Name(s)**
Purple starthistle	*Centaurea calcitrapa*	
Rush skeletonweed	*Chondrilla juncea*	
Russian knapweed	*Centaurea repens*	
Saltcedar	*Tamarix ramosissima*	Tamarisk
Scotch thistle	*Onapordum acanthium*	
Silverleaf nightshade	*Solanum elaeagnifolium*	White horsenettle
Spotted knapweed	*Centaurea maculosa*	
Squarrose knapweed	*Centaurea virgata ssp. squarrosa*	
Sulfer cinquefoil	*Potentilla recta*	
Yellow starthistle	*Centaurea solstitialis*	
Yellow toadflax	*Linaria vulgaris*	butter and eggs
Waterhemlock	*Cicuta ssp.*	
Western waterhemlock	*Cicuta douglasii*	
Wild licorice	*Glycyrrhiza lepidota*	American licorice

Appendix Five

U. S. Fish and Wildlife Service

Nevada Fish and Wildlife Office

Nevada's Endangered, Threatened, and Candidate Species by County

U. S. FISH AND WILDLIFE SERVICE
NEVADA FISH AND WILDLIFE OFFICE
NEVADA'S ENDANGERED, THREATENED, AND CANDIDATE SPECIES BY COUNTY
(Updated June 1999)

CARSON CITY RURAL AREA

Birds

E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*

CHURCHILL COUNTY

Birds

PT	Mountain plover*	*Charadrius montanus*
E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*

Fish

T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

CLARK COUNTY

Birds

PT	Mountain plover*	*Charadrius montanus*
E	Southwestern willow flycatcher	*Empidonax traillii extimus*
E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*
E	Yuma clapper rail	*Rallus longirostris yumanensis*

Fishes

E	Devil's Hole pupfish	*Cyprinodon diabolis*
E	Pahrump poolfish	*Empetrichthys latos*
E	Bonytail chub	*Gila elegans*
E	Virgin River chub	*Gila seminuda*
E	Moapa dace	*Moapa coriacea*
T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*
E	Woundfin	*Plagopterus argentissimus*
E	Razorback sucker	*Xyrauchen texanus*

Reptile

T	Desert tortoise	*Gopherus agassizii*

Plants

C	Blue Diamond cholla	*Opuntia whipplei* var. *multigeniculata*

DOUGLAS COUNTY

Birds

E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*

ELKO COUNTY

Birds

E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*

Fishes

T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*
E	Independence Valley speckled dace	*Rhinichthys osculus lethoporus*
E	Clover Valley speckled dace	*Rhinichthys osculus oligoporus*
T	Bull trout	*Salvelinus confluentus*

Amphibian

C	Spotted frog	*Rana luteiventris*

Plant

C	Sulphur Springs buckwheat	*Eriogonum argophyllum*

ESMERALDA COUNTY

Bird

T	Bald eagle	*Haliaeetus leucocephalus*

Reptile

T	Desert tortoise	*Gopherus agassizii*

EUREKA COUNTY

Birds

PT	Mountain plover*	*Charadrius montanus*
T	Bald eagle	*Haliaeetus leucocephalus*

Fish

T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

Amphibian

C	Spotted frog	*Rana luteiventris*

HUMBOLDT COUNTY

Bird

T	Bald eagle	*Haliaeetus leucocephalus*

Fishes

T	Desert dace	*Eremichthys acros*
T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

Amphibian

C	Spotted frog	*Rana luteiventris*

LANDER COUNTY

Birds

C	Mountain plover*	*Charadrius montanus*
T	Bald eagle	*Haliaeetus leucocephalus*

Fish

T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

Amphibian

C	Spotted frog	*Rana luteiventris*

LINCOLN COUNTY

Birds

E	Southwestern willow flycatcher	*Empidonax traillii extimus*
T	Bald eagle	*Haliaeetus leucocephalus*

Fishes

E	White River springfish	*Crenichthys baileyi baileyi*
E	Hiko White River springfish	*Crenichthys baileyi grandis*
E	Pahranagat roundtail chub	*Gila robusta jordani*
T	Big Spring spinedace	*Lepidomeda mollispinis pratensis*

Reptile

T	Desert tortoise	*Gopherus agassizii*

Plant

T	Ute ladies' tresses	*Spiranthes diluvialis*

LYON COUNTY

Birds

PT	Mountain plover*	*Charadrius montanus*
T	Bald eagle	*Haliaeetus leucocephalus*

MINERAL COUNTY

Bird

T	Bald eagle	*Haliaeetus leucocephalus*
E	American peregrine falcon	*Falco peregrinus anatum*

Fishes

E	Hiko White River springfish	*Crenichthys baileyi grandis*
T	Railroad Valley springfish	*Crenichthys nevadae*
T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

NYE COUNTY

Birds

PT	Mountain plover*	*Charadrius montanus*
E	Southwestern willow flycatcher	*Empidonax traillii extimus*
T	Bald eagle	*Haliaeetus leucocephalus*

Fishes

E	Devils Hole pupfish	*Cyprinodon diabolis*
E	Ash Meadows Amargosa pupfish	*Cyprinodon nevadensis mionectes*
E	Warm Springs pupfish	*Cyprinodon nevadensis pectoralis*
E	White River spinedace	*Lepidomeda albivallis*
E	Ash Meadows speckled dace	*Rhinichthys osculus nevadensis*
T	Railroad Valley springfish	*Crenichthys nevadae*
T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

Reptile

T	Desert tortoise	*Gopherus agassizii*

Amphibian

C	Spotted frog	*Rana luteiventris*

Invertebrate

T	Ash Meadows naucorid bug	*Ambrysus amargosus*

Plants

T	Ash Meadows milkvetch	*Astragalus phoenix*
T	Spring-loving centaury	*Centaurium namophilum*
T	Ash Meadows sunray	*Enceliopsis nudicaulis* var. *corrugata*
T	Ash Meadows gumplant	*Grindelia fraxino-pratensis*
T	Ash Meadows ivesia	*Ivesia eremica* (= *I. kingii* var. *eremica*)
T	Ash Meadows blazing star	*Mentzelia leucophylla*
E	Amargosa niterwort	*Nitrophila mohavensis*

PERSHING COUNTY

Bird

T	Bald eagle	*Haliaeetus leucocephalus*

STOREY COUNTY

Bird

T	Bald eagle	*Haliaeetus leucocephalus*

Fish

T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

WASHOE COUNTY

Birds

E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*

Fishes

E	Cui-ui	*Chasmistes cujus*
T	Warner sucker	*Catostomus warnerensis*
T	Lahontan cutthroat trout	*Oncorhynchus clarki henshawi*

Plant

E	Steamboat buckwheat	*Eriogonum ovalifolium* var. *williamsiae*

WHITE PINE COUNTY

Birds

E	American peregrine falcon	*Falco peregrinus anatum*
T	Bald eagle	*Haliaeetus leucocephalus*

Fishes

E	Pahrump poolfish	*Empetrichthys latos*
E	White River spinedace	*Lepidomeda albivallis*

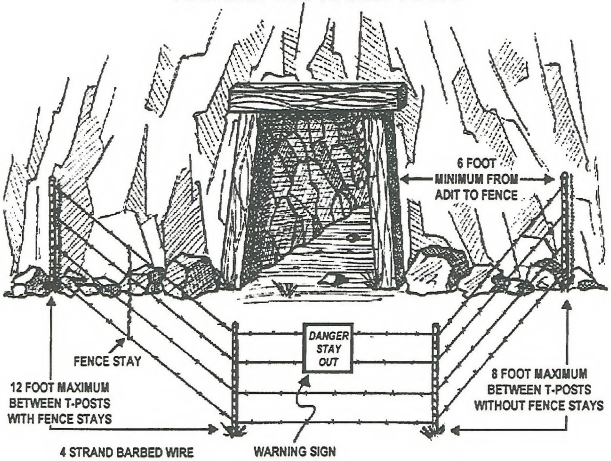
T = Threatened; E = Endangered; P = Proposed for listing as endangered or threatened; C = Species for which the Fish and Wildlife Service has sufficient information on file on status and threats to support issuance of a proposed listing rule.

* = Uncommon transient in Nevada; may be found elsewhere in the state.

Appendix Six

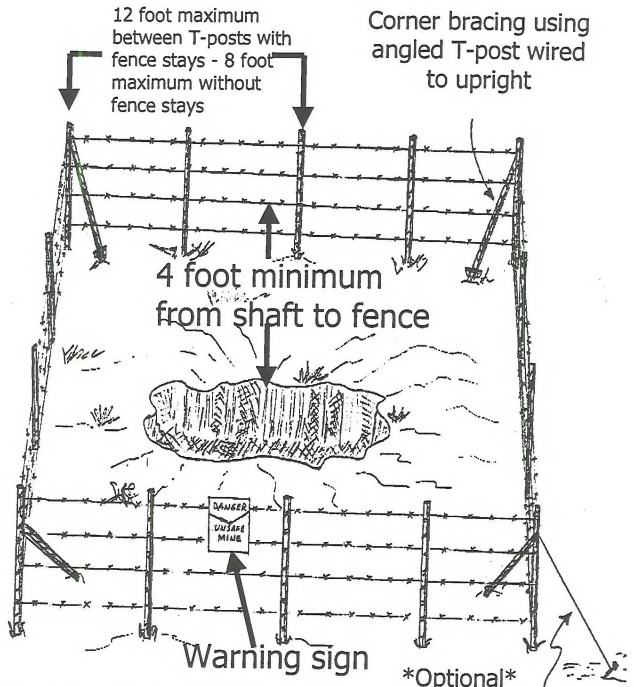
Minimum Standards for NDOM Built Fences Around Orphaned Mine Shafts

MINIMUM STANDARDS FOR NDOM BUILT FENCES AROUND ORPHANED ADITS



4 STRAND BARBED WIRE
4 FEET HIGH TO TOP WIRE
1 FOOT BETWEEN WIRES
6 FOOT T-POSTS PLANTED SOLIDLY
FENCE MAY OR MAY NOT COMPLETELY CIRCLE ADIT, DEPENDING ON TOPOGRAPHY.
AT LEAST ONE WARNING SIGN PER ADIT OR 100' OF FENCE.

Minimum Standards for NDOM-Built Fences Around Orphaned Mine Shafts


12 foot maximum between T-posts with fence stays - 8 foot maximum without fence stays
Corner bracing using angled T-post wired to upright
4 foot minimum from shaft to fence
DANGER
UNSAFE MINE
Warning sign
Optional
Anchored corners if corner bracing not feasible

4 strand barbed wire - 6 foot T-posts planted solidly

4 feet high to top wire

1 foot between wires

At least one warning sign per mine opening or 100 feet of fence

Appendix Seven

Cooperative Agreement between

the Nevada Division of Minerals

and the Bureau of Land Management

**COOPERATIVE AGREEMENT BETWEEN
THE
NEVADA DEPARTMENT OF BUSINESS AND INDUSTRY,
DIVISION OF MINERALS
AND THE
BUREAU OF LAND MANAGEMENT,
NEVADA STATE OFFICE**

This Cooperative Agreement (CA) is entered into between the State of Nevada, Department of Business and Industry, Division of Minerals (NDOM), and the Bureau of Land Management, Nevada State Office (BLM).

I. STATEMENT OF JOINT OBJECTIVES

A. Purpose.

The purpose of this Agreement is to protect the public's health and safety from physical hazards associated with abandoned mines that are located on public lands managed by BLM in Nevada.

B. Objectives.

The objectives of this Agreement include:

1. Identification and inventorying of abandoned mine hazards in Nevada,
2. Conducting research on mining claim status on land where hazards exist,
3. Ranking the degree of abandoned mine hazards,
4. Physically securing mine hazards in a manner proscribed by the BLM/NDOM CA serialized BLM-CA-3800-NV920-9501.

C. Authority.

This CA is based on the following authorities:

1. NDOM
   a. Nevada Revised Statute, NRS 513, NRS 519A,
   b. Nevada Regulation NAC 513.

2. BLM
   a. Sections 302, 303, 307 and 601 and of the Federal Land Policy and Management Act of 1976, as amended (90 STAT 2762, 43 USC 1732 et seq.),
   b. The U.S. Mining Law of May 10, 1872, as amended (30 USC 22, et seq.).

II. DEFINITIONS:

Agreement: means this cooperative agreement.
Assistance Officer (AO): means the Bureau of Land Management's Assistance Officer.
Agreement Representative (AR): means the BLM's representative for administering this agreement.
BLM: means the Bureau of Land Management.
Effective date: means the date of the latest signature by the BLM or the NDOM representative on this agreement.
NDOM: means the Nevada Department of Business and Industry, Division of Minerals.
Not-to-Exceed Amount (NTE): means the maximum funding amount of the BLM's financial liability.

III. PROJECT MANAGEMENT PLAN

A. The NDOM agrees to:

1. Coordinate abandoned mine land program issues on BLM managed lands in Nevada with the BLM Nevada State Office and appropriate District Offices.

2. Inventory hazards, conduct claim research, rank the degree of hazard, and physically secure hazards.

3. Participate in BLM workshops and training sessions, as appropriate.

4. Provide the AR with quarterly progress reports.

C. Authority.

This CA is based on the following authorities:

1. NDOM
   a. Nevada Revised Statute, NRS 513, NRS 519A,
   b. Nevada Regulation NAC 513.

2. BLM
   a. Sections 302, 303, 307 and 601 and of the Federal Land Policy and Management Act of 1976, as amended (90 STAT 2762, 43 USC 1732 et seq.),
   b. The U.S. Mining Law of May 10, 1872, as amended (30 USC 22, et seq.).

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NDOM: means the Nevada Department of Business and Industry, Division of Minerals.
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III. PROJECT MANAGEMENT PLAN

A. The NDOM agrees to:

1. Coordinate abandoned mine land program issues on BLM managed lands in Nevada with the BLM Nevada State Office and appropriate District Offices.

2. Inventory hazards, conduct claim research, rank the degree of hazard, and physically secure hazards.

3. Participate in BLM workshops and training sessions, as appropriate.

4. Provide the AR with quarterly progress reports.

B. The BLM agrees to:

1. Provide advanced yearly payments to NDOM.

2. Payments are authorized for per diem and air transportation of designated NDOM employees for authorized training, workshops, and meetings, when authorized by the AR.

IV. TERMS OF AGREEMENT.

This Agreement shall become effective upon signature by the Administrator of the NDOM, the Nevada BLM State Director, and the BLM's Assistance Officer, and shall remain in effect for two years unless formally terminated by either agency after 60 days written notice to the other agency. This Agreement may be renewed subject to availability of federal funding and by mutual written modification signed by all parties named above to this Agreement.

V. FINANCIAL SUPPORT.

A. This Agreement shall be funded at the beginning of each fiscal year.

B. Funds obligated but not expended in one year can be carried forward and expended in the subsequent year.

C. A total of $80,000 represents the NTE for each fiscal year. The FY95 funding is prorated from June 1, 1995, through September 30, 1995, total not to exceed $47,000. The BLM shall not be obligated to pay for nor shall NDOM be obligated to perform any effort that will require the expenditure of federal funds above the NTE amount.

VI. AMENDMENTS.

Amendments to this agreement may be proposed at any time by any party to the agreement and shall become effective upon written approval by all parties to the agreement.

VII. PROPERTY MANAGEMENT AND DISPOSITION

Any BLM property used in performance of this Agreement shall be governed by the provisions of Attachment N of OMB Circular A-102.

VIII. SPECIAL TERMS AND CONDITIONS

A. Order of Precedence

Any inconsistency in this cooperative agreement shall be resolved by giving precedence in the following order: (a) Any national policy requirements or standards; (b) requirements of the applicable OMB and Treasury Circulares; (c) documents, exhibits, and attachments.

B. Modifications

This agreement may be modified by written agreement signed by both NDOM official and the AO. Administrative changes (i.e. assistance officer name change) which do not change the project management plan, Not-to-Exceed amount, etc. or otherwise affect the recipient may be signed unilaterally by the AO.

IX. GENERAL PROVISIONS

A. National Policy Requirements and Administrative Management Standards

All applicable national policy requirements and administrative management standards as set forth in Office of Management and Budget, Financial Management Division, Directory of Policy Requirements and Administrative Standards for Federal Aid Programs are incorporated by reference.

B. OMB Circular A-102, Uniform Administrative Requirements for Grants-In-Aid to State and Local Governments is incorporated by reference.

C. OMB Circular A-87, Cost Principles for State and Local Governments is incorporated by reference.

X. KEY OFFICIALS

A. Bureau

1. **Assistance Officer:**
Wilma L. Frei, Bureau of Land Management is the Assistance Officer for this agreement. Telephone Number 702-785-6417. Mailing Address: Bureau of Land Management, Nevada State Office, 850 Harvard Way, P.O. Box 12000, Reno, NV 89520-0006. The AO is the only individual authorized to obligate funds, award, modify or terminate the agreement. The AO is responsible for monitoring agreement compliance, enforcing the agreement provisions, issuing timely performance and payment approvals, and terminating and/or closing out the agreement.

2. **Assistance Representative:**
Larry Steward, Bureau of Land Management, Nevada State Office, 850 Harvard Way, P.O. Box 12000, Reno, NV 89520-0006 is designated as the Assistance Representative for the purpose of administering the technical aspect of the agreement. The AR is authorized to clarify technical requirements, and to review and approve work which is clearly within the scope of the work specified in this agreement. The AR is not authorized to issue changes or in any other way modify this agreement.

B. Nevada Department of Business and Industry, Division of Minerals

Russell A. Fields, Administrator
State of Nevada
Department of Business and Industry
Division of Minerals
400 W. King Street, Suite 106
Carson City, NV 89710

Appendix Eight

Nevada Division of Minerals Scoping Comments

Appendix 8: Comments from the Nevada Division of Minerals:

Mr. Chris Ross
Bureau of Land Management, NSO
P.O. Box 12000
Reno, NV 89520-0006

Re: Recommendations for inclusion in Programmatic EA for abandoned mine securing

Dear Mr. Ross:

The Nevada Division of Minerals offers the following recommendations for inclusion into the Programmatic EA for abandoned mine securing:

The EA should state that with Nevada's high numbers of potentially hazardous abandoned mine openings and rapidly growing population, the primary purpose of securing an abandoned mine is to reduce the likelihood of people and animals becoming accidently injured or killed at an abandoned mine, and not necessarily to secure all abandoned mines to the point where they are absolutely "idiot proof."

The BLM and Division of Minerals entered into a Cooperative Agreement (No. 1422F950A50010) in December 1994 regarding the securing of abandoned mines located on BLM administered lands in Nevada. This CA, while perhaps not perfect, has stood the test of time and has benefitted both agencies and the general public. This CA does, however, impose a degree of paperwork on both agencies that is not productive in terms of "on the ground" accomplishments. Because both agencies have limited resources to address a big problem, the EA should focus on reducing the paperwork, and accelerating the "approval to secure" process as it currently exists.

The EA should address the fact that abandoned mine openings vary considerably in their degree of hazard. The EA should place particular emphasis on the BLM's timely approval for the Division of Minerals to secure the more hazardous mine openings. Of course, approval to secure the less hazardous sites should also be timely.

The EA should mention some statistics on the numbers of abandoned mines estimated to exist, and on the inventorying and securing progress made so far. See the following paragraph.

As of August 1, 2000, the Division of Minerals has identified and ranked the degree of hazard for 7,916 hazards, and has documented the securing of 5,766. Of the 5,766 securings, 4,305 have been secured by fencing, barricading, posting or bat-gating, while 1,461 have been permanently secured. Of the 1,461 permanent securings, 69 have been the result of natural erosion, and about 450-500 have been consumed by modern open pit mines. The remainder have been secured by backfilling.

The EA should contain a section on the various securing methods and discuss the pros and cons, including the environmental impact of each of these methods. Fencing, for example, is relatively inexpensive, is not an impediment to reptiles, birds, bats, or other small mammals, does not harm future exploration efforts, does not create any new ground disturbances, and does not harm cultural resources. Fencing can, however, be vandalized. Backfilling, if properly done, is the best method in terms of public safety, but it is relatively expensive, totally destroys the mine, and may create additional ground disturbances.

The EA should list alternatives. In addition to the "no-action" alternative, immediate fencing, immediate fencing followed by backfilling on a case-by-case basis, and totally backfilling everything should all be possible alternatives. The Division of Minerals' preferred alternative would be immediate fencing followed by backfilling on a case-by-case basis.

The EA should be concerned only with physical hazards at abandoned mines where no owner or active mining claimant can be identified.

The Division of Minerals appreciates the opportunity to provide input to this important EA scoping process. The Division also hopes to continue and perhaps enhance the cooperative relationship it has with the BLM regarding

abandoned mines. The Division hopes this EA will be a step in that direction by giving both agencies the ability to make our public lands as safe as possible as soon as possible.

Sincerely,

Doug Driesner
Director of Mining Services

Bill Durbin
Chief, Abandoned Mine Lands

Appendix Nine

Unsigned FONSI

Sample Documentation of NEPA Adequacy (DNA)

Sample Notice to Proceed

Guidelines for Using the DNA Worksheet and Evaluating the NEPA Adequacy Criteria

Documentation of NEPA Adequacy (DNA)

If the criteria and assumptions of this programmatic EA are met, a Documentation of NEPA Adequacy (DNA) may be completed and a notification to proceed may be issued pursuant to this EA and the Cooperative Agreement with Nevada Division of Minerals.

"This proposal has met all of the requirements contained in EA#_____ and the accompanying DNA and is therefore approved."

Supplemental EAs:

If the proposed action is beyond the scope of this EA, a site specific EA may be tiered upon this on to analyze the proposed action.

Sample Notice to Proceed

Based on the analysis contained in EA#_____, and pursuant to Cooperative Agreement#_____, the Nevada Division of Minerals (NDOM) is authorized to proceed with (describe action i.e. remediation, secure opening, install gate, backfill, etc. at (describe location).

Mitigation will be as outlined in EA performance measures.

The authorized action is withing the scope of activity analysed in EA#_____ and no further analysis is required.

Authorized Officer sign

Guidelines for Using the DNA Worksheet and Evaluating the NEPA Adequacy Criteria

These guidelines supplement the policies contained in the Instruction Memorandum entitled "Documentation of Land Use Plan Conformance and National Environmental Policy Act (NEPA) Adequacy". During preparation of this worksheet, if you determine that one or more of the criteria are not met, you do not need to complete the Worksheet. If one or more of these criteria is not met, you may reject the proposal, or complete appropriate NEPA compliance (EA, EIS, Supplemental EIS, or CX if applicable) and plan amendments before proceeding with the proposed action. Documenting why the criterion (criteria) has (have) not been met may be beneficial in preparing new or supplemental NEPA documents, however.

Criterion 1. **Is the current proposed action substantially the same action (or is a part of that action) as previously analyzed? Is the current proposed action at a site specifically analyzed in an existing NEPA document?** In the limited situations in which an existing NEPA document(s) can properly be relied upon without supplementation, explain whether and how the existing documents analyzed the proposed action (include page numbers). If there are differences between the actions included in existing documents and the proposed action, explain why they are not considered to be substantial.

Criterion 2. **Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the current proposed action, given current environmental concerns, interests and resource values?** Explain whether the alternatives to the current proposed action that were analyzed in the existing NEPA documents and associated record constitute a reasonable range of alternatives with respect to the current proposed action, and if so, how. Identify how current issues and concerns were addressed within the range of alternatives in existing NEPA documents. If new alternatives are being proposed by the public to address current issues and concerns, and you conclude they do not need to be analyzed, explain why.

Criterion 3. **Is the existing analysis valid in light of any new information or circumstances?** New information or circumstances could include the following. If any of the listed items below are applicable, you need to determine whether it (they) constitute(s) new information or circumstances.

a. New standards or goals for managing resources. Standards and goals include, but are not limited to: BLM's land health standards and guidelines, recovery plans for listed species prepared by the Fish and Wildlife Service or National Marine Fisheries Service, requirements contained in a biological opinion or conference report related to Section 7 of the Endangered Species Act, and the requirement to address disproportionate impacts on minority populations and low income communities (E.O. 12898).

b. Changes in resource conditions within the affected area the existing NEPA analyses were conducted, e.g., changes in habitat condition and trend; listed, proposed, candidate, and Bureau designated sensitive species; water quality, including any identified impaired water bodies under Section 303 of the Clean Water Act; air quality; vegetation condition and trend; soil stability; visual quality; cultural resource condition; and wildlife population trend(s); etc.

c. Changes of resource-related plans, policies, or programs of State and local

governments, Indian tribes, or other federal agencies.

d. Designations established in the affected area since the existing NEPA analysis and documentation was prepared. Designations include, but are not limited to wilderness, wilderness study areas, National Natural Landmarks, National Conservation Areas, National Monuments, National Register properties, Areas of Critical Environmental Concern, and Research Natural Areas.

Criterion 4. **Do the methodology and analytical approach used in the existing NEPA document continue to be appropriate for the proposed action?** Explain how the methodologies and analytical approach used in the existing NEPA document are current and sufficient for supporting approval of the proposed action. If valid new technologies and methodologies (e.g. air quality modeling) exist, explain why it continues to be reasonable to rely on the method previously used.

Criterion 5. **Are the direct and indirect impacts of the current proposed action substantially unchanged from those analyzed in the existing NEPA document(s)? Does the existing NEPA document analyze site-specific impacts related to the current proposed action?** Review the impact analysis in the existing NEPA document(s). Explain how the direct and indirect impacts of the proposed action are analyzed in the existing NEPA documents, and would, or would not, differ from those identified in the existing NEPA document. Consider the effect new information or circumstances may have on the environmental impacts predicted in the existing NEPA document.

Criterion 6. **Are the cumulative impacts that would result from implementation of the proposed action substantially unchanged from those identified in the existing NEPA document(s)?** Would the current proposed action, if implemented, change the cumulative impact analysis? Consider the impacts analysis in existing NEPA documents, the effects of relevant activities that have been implemented since existing NEPA documents were completed and the effects of the current proposed action.

Criterion 7. **Is the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?** Explain how the nature of public involvement in previous NEPA documents continues to be adequate and valid in light of current issues, concerns, views, and controversies.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

July 1, 1999

In Reply Refer To:
1790 (210) P

EMS TRANSMISSION 07/06/99
Instruction Memorandum No. 99-149
Expires: 9/30/00

To: Washington Office and Field Office Officials

From: Director

Subject: Documentation of Land Use Plan Conformance and National Environmental Policy Act (NEPA) Adequacy

The purpose of this memorandum is to reemphasize the policy of the Bureau of Land Management to fully comply with the National Environmental Policy Act (NEPA). This Instruction Memorandum (and attached Worksheet, "Interim Documentation of Land Use Plan Conformance and NEPA Adequacy") will assist you to assess whether you can rely on existing NEPA documents for a current proposed action, and, if so, assist you to record your rationale for your conclusion. You should not assume that existing NEPA documents are adequate. Generally, the use of existing NEPA documents is appropriate when: a current proposed action previously was proposed and analyzed (or is a part of an earlier proposal that was analyzed); resource conditions and circumstances have not changed; and there is no suggestion by the public of a significant new and appropriate alternative.

If you determine you can properly rely on existing NEPA documents, you must establish an administrative record that documents clearly that you took a "hard look" at whether new circumstances, new information, or unanticipated environmental impacts warrant new analysis or supplementation of existing NEPA documents and whether the impact analysis is valid for the proposed action. The documentation can be concise but must adequately address the criteria. You must read and review the relevant parts of the existing record, including terms, conditions, and mitigation measures, in the context of existing on-the-ground conditions. As you review the existing documents, you should take into account the effect of the age of the documents.

You must accomplish this assessment through an interdisciplinary process that considers the affected values. There is considerable flexibility in accomplishing the interdisciplinary analysis. It may vary from the assembly of a full interdisciplinary team to consultation by the lead staff specialist or NEPA coordinator with resource specialists assigned to affected resources.

Because you must first review the land use plan (LUP) to insure that the current proposed action is in conformance with the plan, the Worksheet provides for documentation of the results of the LUP review. If you determine that the current proposed action does not conform with the plan and you wish to further consider the proposal, you do not need to complete the Worksheet. You may reject the proposal or complete appropriate plan amendments and NEPA compliance before proceeding with the proposed action. Similarly, if you determine that the existing NEPA documents are inadequate, you do not need to complete the Worksheet. You may reject the proposal or complete appropriate NEPA documentation.

The Worksheet addresses whether the current proposal conforms with applicable plans and is adequately analyzed in existing NEPA documents. It should be noted that the signed conclusion in the Worksheet is an interim step in BLM's internal decision process and does not constitute an appealable decision. The Worksheet and Guidelines are being issued as interim measures to assist in meeting NEPA requirements. The Worksheet must be used in lieu of the sample worksheet in the BLM NEPA Handbook (Illustration 1, Optional Plan Conformance/NEPA Compliance Record, following page III-8), or any similar worksheet.

The Washington Office Planning, Assessment, and Community Support Group (WO-210) will evaluate the use of the Worksheet and Guidelines this fall and will make any necessary modifications and finalize them at that time. The evaluation will include an assessment of the documentation provided and of the workload involved in completing the Worksheet, the utility of the Worksheet, and the appropriateness of the interim criteria.

You may consult with your NEPA coordinator, the Washington Office, or the Regional Solicitor's Office to assist in determining whether you need to prepare an EIS, EA, or supplemental EIS in connection with a particular action. Questions regarding this memorandum should be directed to Paul Politzer, Acting Group Manager, Planning, Assessment, and Community Support (WO-210).

Signed by:
Nina Rose Hatfield
Deputy Director

Authenticated by:
Robert M. Williams
Directives, Records
& Internet Group,WO540

1 Attachment
1 - Interim Worksheet and Guidelines for Documentation of Land Use Plan Conformance and NEPA Adequacy (6 pp)

Worksheet

Interim
Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)

U.S. Department of the Interior Bureau of Land Management

Note: This Worksheet is to be completed consistent with the policies stated in the Instruction Memorandum entitled, "Documentation of Land Use Plan Conformance and National Environmental Policy Act (NEPA) Adequacy" transmitting this Worksheet and the "Guidelines for using the DNA Worksheet," located at the end of the Worksheet.

A. Describe the Proposed Action

_____
_____
_____
_____
_____

B. Land Use Plan (LUP) Conformance

LUP Name* _____ Date Approved _____
Other document _____ Date Approved _____
Other document _____ Date Approved _____

* List applicable LUPs (e.g., Resource Management Plans and activity, project, management, or program plans, or applicable amendments thereto)

☐ The proposed action is in conformance with the applicable LUPs because it is specifically provided for in the following LUP decisions:

_____
_____
_____
_____
_____

☐ The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (objectives, terms, and conditions):

_____
_____
_____
_____
_____

C. Identify applicable NEPA documents and other related documents that cover the proposed action.

List by name and date all applicable NEPA documents that cover the proposed action.

List by name and date other documentation relevant to the proposed action (e.g., biological assessment, biological opinion, watershed assessment, allotment evaluation, and monitoring report).

D. NEPA Adequacy Criteria

1. Is the current proposed action substantially the same action (or is a part of that action) as previously analyzed? Is the current proposed action located at a site specifically analyzed in an existing document?

Documentation of answer and explanation:

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the current proposed action, given current environmental concerns, interests, and resource values?

Documentation of answer and explanation:

3. Is the existing analysis valid in light of any new information or circumstances?

Documentation of answer and explanation:

4. Do the methodology and analytical approach used in the existing NEPA document(s) continue to be appropriate for the current proposed action?

Documentation of answer and explanation:

5. Are the direct and indirect impacts of the current proposed action substantially unchanged from those identified in the existing NEPA document(s)? Does the existing NEPA document analyze site-specific impacts related to the current proposed action?

Documentation of answer and explanation:

6. Are the cumulative impacts that would result from implementation of the current proposed action substantially unchanged from those analyzed in the existing NEPA document(s)?

Documentation of answer and explanation:

7. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?

Documentation of answer and explanation:

E. Interdisciplinary Analysis: Identify those team members conducting or participating in the NEPA analysis and preparation of this worksheet.

Name	Title

Conclusion

☐ Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA

Note: If you found that one or more of these criteria is not met, you will not be able to check this box.

Signature of the Responsible Official

Date

Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision.

Finding of No Significant Impact (FONSI)

The Bureau of Land Management is required by the Federal Land Policy and Management Act of 1976 and the Cooperative Agreement between the Nevada Division of Minerals and the BLM Nevada State Office to remediate hazards to human safety associated with Abandoned Mined Lands (AMLs) in Nevada. The proposed action would allow the BLM to give concurrence to typical actions taken to secure hazardous AMLs.

BLM would employ the standard performance measures developed in the proposed action to approve specific requests from the Nevada Division of Minerals to secure hazardous AML sites.

Summary of Environmental Assessment:

This finding of No Significant Impact is supported by the Programmatic Environmental Assessment for Remediation of Abandoned Mine Safety Hazards in Nevada (EA), released for public review on October 3, 2000. This EA is summarized as follows:

- The proposed action (PA) consists of typical remediation proposals. The PA does not include sites which pose threats to surface or groundwaters, or for which there is a potentially responsible party, or which involve hazardous materials other than those explosives included in the above mentioned Cooperative Agreement.

- Performance measures were developed to prevent impacts to resources on public lands for the actions described in the PA.

- All proposed remediation activities will be reviewed against the standards contained in this EA. Any additional impacts not previously identified will be subject to additional analysis before the remediation activities would be authorized.

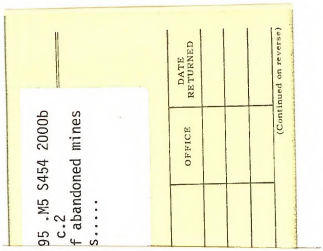
Determination

On the basis of analysis of potential environmental impacts contained in the enclosed EA and all other information available to me, it is my determination that the proposed action will not have any significant impacts on the human environment. Therefore, an Environmental Impact Statement is not required.

Robert V. Abbey
State Director, Nevada

12-29-00
Date

DEPARTMENT OF



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Remediation of abandoned mines
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